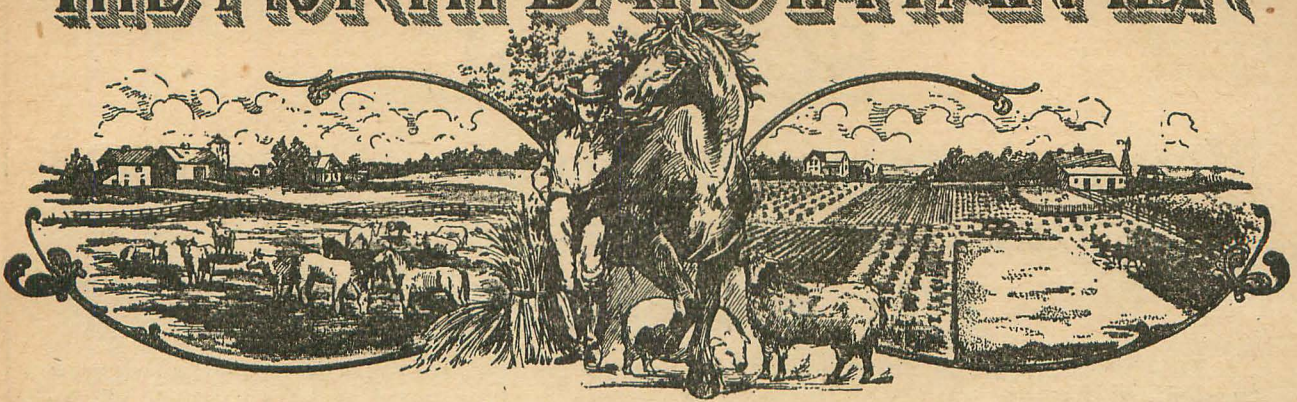


THE NORTH DAKOTA FARMER



75 Cents A Year

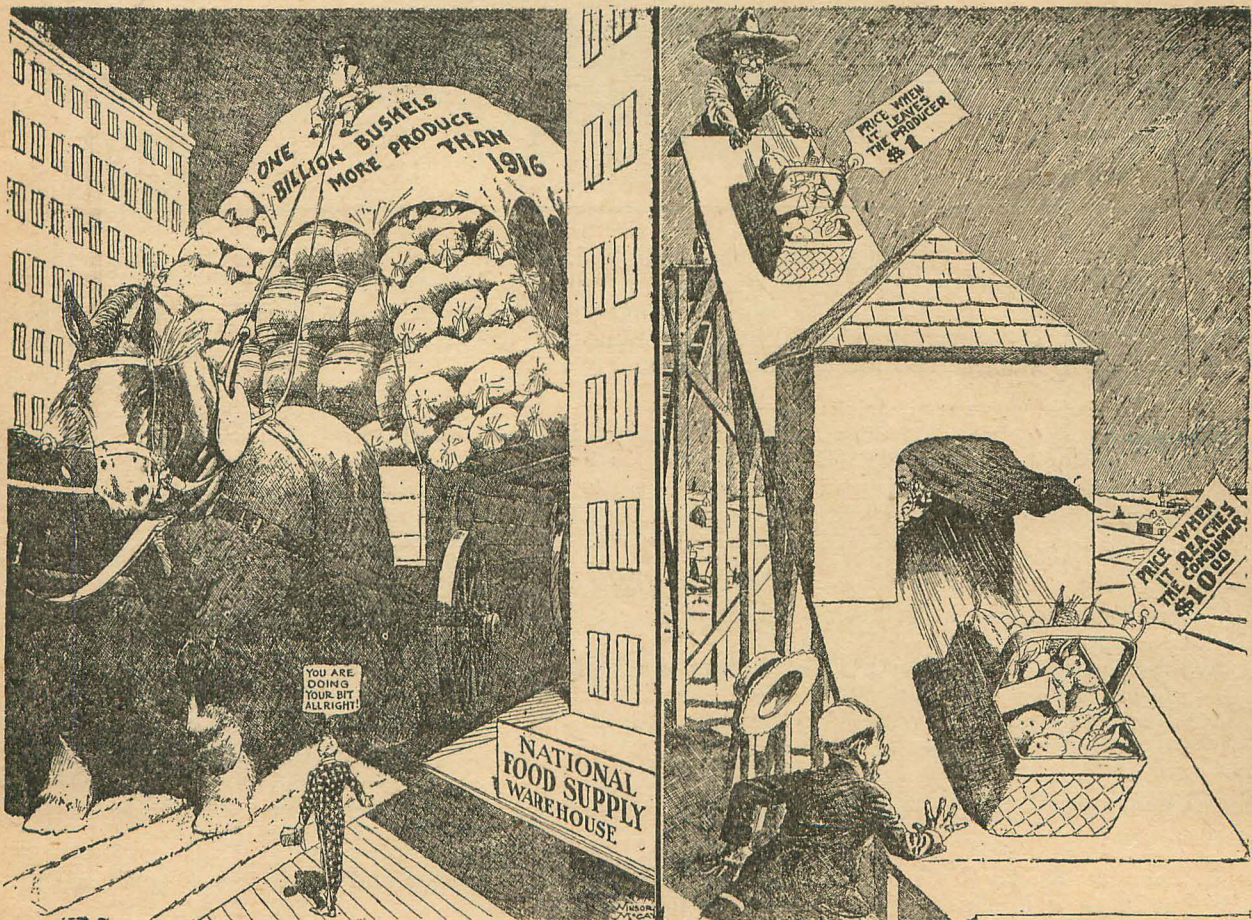
Lisbon, N. D.

August 15, 1917

Vol. 19, No. 2

Alex Alin

The Situation Sized Up by the Cartoonist of the New York American



In response to the Government's urgent appeal the American Farmer has certainly "Done his Bit," but both he and the Government have an eye on the Fellow in the Way Station.

978.4
N 814
Graham

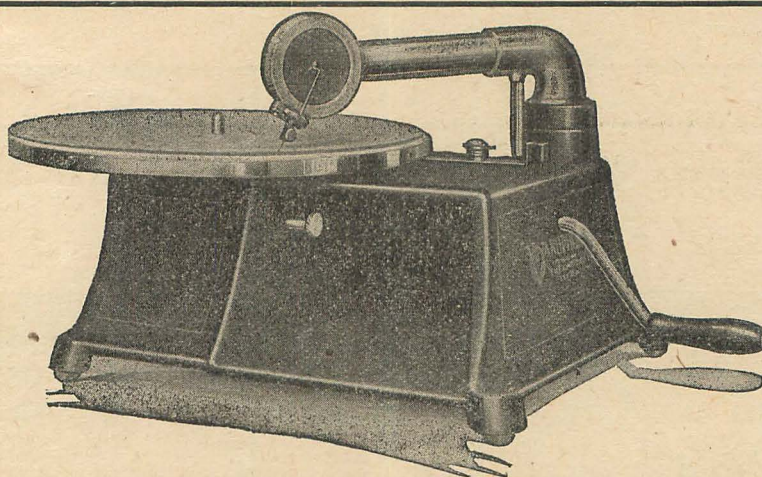
THE HOME AND THE SCHOOL

May now enjoy the masters of vocal and
instrumental music at little or no cost

The VANOPHONE

This phonograph is portable, weighs but 12 pounds, reproduces perfectly (without the hollow, metallic sounds of the brass projectors) instrumental and vocal music of the highest quality. It is no toy. It plays 6-inch, 8-inch, 10-inch or 12-inch standard records. It sells for \$12.

**A
MUSIC
MASTER
FOR THE
MASSES**



**AT
PRACTI-
CALLY
NO
COST**

The past summer I played this phonograph beside one costing several times as much and I was surprised to find that the tones were equally pure and distinct. So pleased was I that I determined to offer the Vanophone as a premium for subscribers to my three publications: The North Dakota Farmer, Rotary and Westland Educator, all of which should be in every North Dakota school, and the two former in every home.

Here is one of many testimonials:

In my opinion, the difference between your Vanophone and the \$300 phonograph lies mainly in the fact that the latter machine has a very expensive mahogany cabinet, while your instrument contains nothing but the heart or mechanism which does the reproducing—it is free from all extravagant frills. There's a musical surprise in store for every person who purchases a Vanophone.—Geo. W. Kinzel, 1580 E. 23 st, Cleveland, O.

MY OFFER

Simply send me the following subscriptions at the regular subscription price and the Vanophone is yours:

8 Subscriptions to the North Dakota Farmer at \$.75.....	\$ 6.00
10 Subscriptions to the Rotary at \$.50.....	5.00
1 Subscription to the Westland Educator.....	1.25
	<hr/>
	\$12.25
Postage and Packing.....	1.00
	<hr/>
	\$13.25

For only \$13.25 the Vanophone will be delivered to your door and the above magazines will be sent to one address or separate addresses for one year.

SPECIAL. Should you find that you cannot secure the above number of subscriptions, let me know the number you can secure and I will name a part-cash payment.

W. G. CROCKER, Publisher, Box F, LISBON, NORTH DAKOTA

THE NORTH DAKOTA FARMER

Vol. 19, No. 2

LISBON, N. D., AUGUST 15, 1917

75 Cents a Year

A Patriot's Viewpoint

By Otto H. Kahn

A century and a half ago Americans of English birth rose to free this country from the oppression of the rulers of England. Today Americans of German birth are called upon to rise, together with their fellow-citizens of all races, to free not only this country but the whole world from the oppression of the rulers of Germany, an oppression far less capable of being endured and of far graver portent.

Speaking as one born of German parents, I do not hesitate to state it as my deep conviction that the greatest service which men of German birth or antecedents can render to the country of their origin is to proclaim, and to stand up for those great and fine ideals and national qualities and traditions which they inherited from their ancestors, and to set their faces like flint against the monstrous doctrines and acts of a rulership which have robbed them of the Germany which they loved and in which they took just pride, the Germany which had the good will, respect and admiration of the entire world.

I do not hesitate to state it as my solemn conviction that the more unmistakably and wholeheartedly Americans of German origin throw themselves into the struggle which this country has entered in order to rescue Germany, no less than America and the rest of the world from those sinister forces that are, in President Wilson's language, the enemy of all mankind, the better they protect and serve the repute of the old German name and the true advantage of the German people.

I measure my words. They are borne out all too emphatically by the hideous eloquence of deeds which have appalled the conscience of the civilized world. They are borne out by numberless expressions, written and spoken, of German professors employed by the state to teach its youth.

The burden of that teaching is that might makes right, and that the German nation has been chosen to exercise morally, mentally and actually, the over-lordship of the world and must and will accomplish that task and that destiny whatever the cost in bloodshed, misery and ruin.

The spirit of that teaching, in its intolerance, its mixture of sanctimoniousness and covetousness and its self-righteous assumption of a world-improving mission, is closely akin to the spirit from which were bred the religious wars of the past thru the

THE KID HAS GONE TO THE COLORS

The Kid has gone to the Colors
And we don't know what to say;
The Kid we have loved and cuddled
Stepped out for the Flag today.
We thought him a child, a baby
With never a care at all,
But his country called him man-size
And the Kid has heard the call.

He paused to watch the recruiting,
Where, fired by the fife and drum,
He bowed his head to Old Glory
And thought it whispered: "Come!"
The Kid, not being a slacker,
Stood forth with patriot-joy
To add his name to the roster—
And God, we're proud of the boy!

The Kid has gone to the Colors:
It seems but a little while
Since he drilled a schoolboy army
In a truly martial style.
But now he's a man, a soldier,
And we lend him listening ear,
For his heart is a heart all loyal,
Unscourged by the curses of fear.

His dad, when he told him, shuddered,
His mother—God bless her!—cried;
Yet, blest with a mother-nature,
She wept with a mother-pride.
But he whose old shoulders straightened
Was Granddad—for memory ran
To years when he, too, a youngster,
Was changed by the Flag to a man!
—(W. M. Herschell in
Michigan Tradesman.

long and dark years when Protestants and Catholics killed one another and devastated Europe.

I speak in sorrow, for I am speaking of the country of my origin and I have not forgotten what I owe to it.

I speak in bitter disappointment, for I am thinking of the Germany of

former days, the Germany which has contributed its full share to the store of the world's imperishable assets and which, in not a few fields of human endeavor and achievement held the leading place among the nations of the earth.

And I speak in the firm faith that, after its people shall have shaken off and made atonement for the dreadful spell which an evil fate has cast upon them, that former Germany is bound to arise again and, in due course of time, will again deserve and attain the good-will and the high respect of the world and the affectionate loyalty of all those of German blood in foreign lands.

But I know that neither Germany nor this country nor the rest of the world can return to happiness and peace and fruitful labor until it shall have been made manifest, bitterly and unmistakably manifest, to the rulers who bear the blood-guilt for this wanton war and to their misinformed and misguided peoples that the spirit which unchained it cannot prevail, that the hateful doctrines and methods in pursuance of which and in compliance with which it is conducted are rejected with abhorrence by the civilized world, and that the over-weening ambitions which it was meant to serve can never be achieved.

The fight for civilization which we all fondly believed had been won many years ago must be fought over again. In this sacred struggle it is now our privilege to take no mean part, and our glory to bring sacrifices.

Now, to return to the beginning. Our one and supreme job, the one purpose to which all others must give way, is to bring this war to a successful conclusion.

To accomplish that, let each one of us feel himself personally responsible, let each one of us work as if our life depended on the result. And, in a very real sense, does not our national life and our individual life depend on the outcome of this war?

Would life be tolerable if the power of Prussianism, run mad and murderous, held the world by the throat, if the primacy of the earth belonged to a government steeped in the doctrines of a barbarous past and supported by a ruling cast which preaches the deification of sheer might, which despises liberty, hates democracy and would destroy both if it could?

To that spirit and to those doctrines, we, citizens of America and servants, as such, of humanity, will oppose our solemn and unshakable resolution "to make the world safe for democracy," and we will say, with a clear conscience, in the noble words

which more than five hundred years ago were uttered by the Parliament of Scotland:

"It is not for glory, or for riches, or for honor that we fight, but for liberty alone which no good man loses but with his life."

Stop Tremendous Manure Waste

Farmers Urged by Assistant Secretary Carl Vrooman to Put an End to Annual Billion Dollar Loss of Fertilizing Materials. Methods Suggested.

Farmers are urged in a statement issued by the Assistant Secretary Carl Vrooman to make every effort to save the vast amount of valuable manure now allowed to go to waste in this country. Assistant Secretary Vrooman estimates that one-half the manure produced in the United States is not used as a fertilizer, there being an annual loss of material worth twelve hundred million dollars—once and a half the value of the country's wheat crop.

"This is not a wild guess," he continues, "but a very shrewd and conservative estimate based on reliable statistics. It has been found that each horse or mule produces annually \$27 worth of manure (as compared with commercial fertilizers); each head of cattle \$20 worth; each hog \$8 worth. Calculating from the 1910 census figures for number of animals on farms—62,000,000 cattle, 24,000,000 horses and mules, 58,000,000 swine, and 54,500,000 sheep and goats, the total value of manure produced is found to be about \$2,461,000,000. Recent investigations by the Department of Agriculture indicate that at least half of this great wealth of fertilizing material is sheer waste. In some good general farming sections not more than 15 per cent of the manure produced is used. Even in the most intensive dairy regions, where cows are largely stall fed and comparatively great care taken with the manure, the loss seems to be approximately 25 per cent.

"Here, then, is a job for the American farmer, worthy of his utmost effort and in keeping with the spirit of this great hour in American history. To save a billion dollars worth of manure is a Herculean task—a veritable latter day Augean stable job,—for it means the handling of literally millions of tons of dung and litter. It means the construction of concrete manure pits, of paved feeding pens or sheds, and greatly increased care in the conservation and use of bedding materials. It means

a lot of work, but it is work that can be done at odd hours and moments, and work that will pay tremendous dividends, not only as a war measure, but conceivably for all time, for if we once get the habit of making full use of our available manure supply we are not likely to lapse into the old, wasteful ways again.

"The cheapest and best way to handle manure, where convenient, is to haul it to the field and spread it daily, or at least every two or three days. In this way, if plenty of bedding be used, practically all the valuable constituents of the manure are saved, since leaching after the manure is on arable land merely serves to put the fertilizing materials where they ought to be. In this way, too, loss thru heating, or "fire-fanging," is avoided.

"Many farmers, however, are not so situated as to make it profitable for them to handle manure in this way. For such farmers the concrete manure pit offers an ideal way of saving manure. Such a pit need not entail great expense. A pit 3 feet deep, 12 feet long and 6 feet wide, with walls and floors 5 inches thick, will serve the needs of the average farm. In ground that does not cave in, only an inside form will be needed for such a pit, except where the concrete extends a few inches above the ground to prevent flooding by surface water. The floor should be re-inforced with woven wire fencing, put in after about two inches of cement has been laid, the section of fencing being cut long enough to bend up a few inches at either end into the side walls. When the re-inforcing has been put in the remaining three inches of the floor is laid and the forms for the side walls set up and used immediately. Use one part cement, two of sand, and four of screened gravel. A pit of this kind is large enough to hold the accumulation of manure on the average farm until such a time as it can be hauled conveniently to the field and spread.

"Another good way to save manure,

especially in the case of hogs or of beef cattle, is to have a concrete paved feed lot, preferably under a shed roof. Where the farmer can not afford a paved floor, a cheap open feeding shed may be made to serve the purpose very well, if abundant bedding is used to absorb the valuable liquid manure. In such a feeding lot or shed, the manure is allowed to gather under the feet of the animals, each day's bedding being strewn over the well-tramped accumulation below. Some farmers using this system arrange their feed racks so that they can be raised from time to time, making it possible to feed till several feet of solidly packed manure has accumulated under the shed. It has been shown that manure suffers little from heating and leaching when handled in this way.

"The feeding shed serves the purpose of giving the general farm, or the feed cattle farm, something of the advantage in the matter of manure saving held by the intensive dairy farm. It has been shown by Farm Management surveys that the manure saved on the American farm under present conditions is almost exactly proportional to the number of animals stalled on the farm, and that the manure of animals not stabled has very little effect on yields, except in cases where field crops are "hogged-off" or otherwise pastured down or where pasture is used in a rotation.

"This great war has brought home to us Americans, as it has never been emphasized before, the fact that we are the world's champion wasters. Without making any comparisons, and subject to correction if it can be shown that the facts are otherwise, I dare aver that our billion dollar manure waste is the world's greatest single economic leak—the prize waste of the champion wastrels. With commercial fertilizers scarce, and some of them almost unobtainable, it would seem well worth our while, in this juncture, even without any reference to war conditions, to do everything within our power to stem this tide of loss, especially in consideration of the fact that stable manure is the best form of fertilizer known. And when we consider further the possible effect of a billion dollars worth of manure upon world production at this time when the solemn duty of saving the world from famine devolves directly upon us,—well, the vital need for manure pits and feeding lots in this broad land of ours becomes pretty clearly apparent."

A piece of old rubber or thick cloth pasted in the heels of the new rubbers will make them wear much longer.

FLAX NOT HARD ON LAND

Not Bad for Crop That Follows— Wheat and Other Crops Do Well After Flax.

The more or less common belief that flax is hard on the land, and particularly bad for the crop that follows it, is unwarranted, according to the specialists of the United States Department of Agriculture. Farmers can safely plan to grow wheat or other crops on flax land the next season. The increased demand for flaxseed to supply linseed oil, widely needed for naval and other war purposes, has caused more than usual interest in flax production.

Farmers need not hesitate to plow up new land or sow old land to flax. While in much of the flax-growing territory flax grown after flax may

department has grown flax successfully for 9 years on the same land at the Judith Basin substation without decrease in yield. Similar results were obtained in 5 years of continuous cropping on dry land at the Huntley, Mont., field station. While it is not good farm practice to grow flax continuously on the same land, because of the danger of loss from wilt and other diseases, these experiments show that flax does not deplete the soil fertility rapidly.

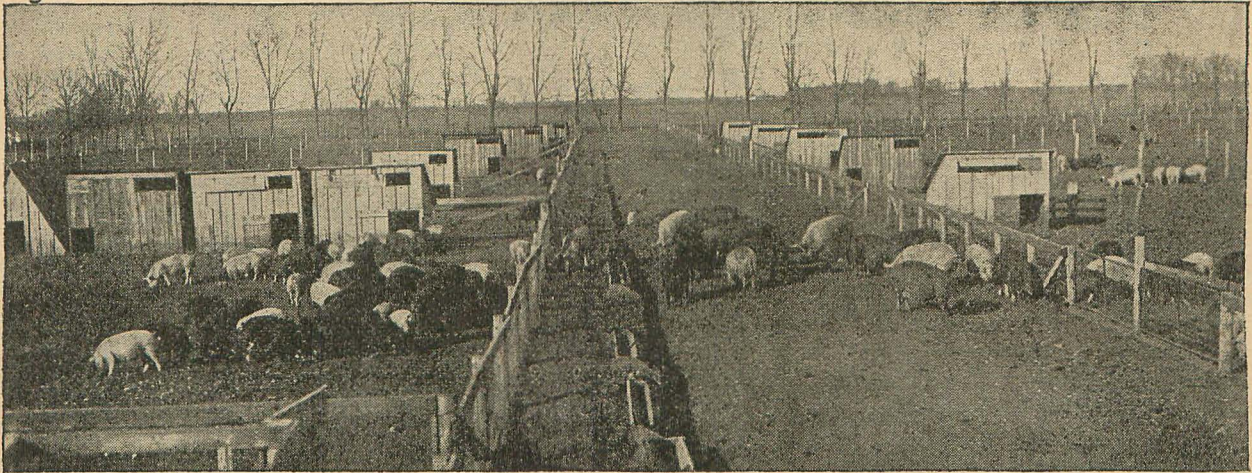
PORK

The Principal Meat of the Army, City and Farm

The quickest and surest way of augmenting the meat supply next to the raising of poultry is by raising hogs. The hog is the most important

the United States is derived from the hog. Our country leads by far all countries in the production as well as in the consumption of meat and meat products. Three-fourths of the world's international trade in pork and pork products originates in the United States in normal times, and the war greatly has increased this proportion. According to the estimates there was an increase of 9,580,000 hogs between 1910, the census year, and 1916, inclusive. The increase at the end of 1915 was 3,148,000 over the preceding year, while it is estimated that there was a decrease at the end of 1916 of 313,000 hogs compared with 1915.

If we expect to continue to provide meat to foreign peoples as well as our own people, every farmer must put forth the best effort to produce more hogs. Hogs can be kept profitably upon many farms where they are not



These \$19 per Hundred Aristocrats are Entitled to the Best Hotel Accommodations

fail because of flax wilt, this disease does not affect the health or productivity of any other crop than flax. Flax wilt introduced into the soil under most conditions prevents profitable repetition of flax, but does not deteriorate the soil.

At the experiment station at Brookings, S. D., the 8-year average yield of barley after flax in a 5-year rotation was 47.7 bushels, or 4.5 bushels more than the average yield of barley from all the rotation plats. In experiments conducted for two years at Moccasin, Mont., and Mandan, N. D., and for one year at Ardmore, S. D., and Archer, Wyo., on spring plowing, wheat after wheat averaged 21.6 bushels and wheat after flax 22.7 bushels. In the same experiments, oats after oats yielded 41.1 bushels and oats after flax 49.3 bushels. In general, both wheat and oats have yielded at least as well, if not better, following flax as they did following small grain.

In cooperation with the Montana Agricultural Experiment Station, the

animal to raise for meat and money. He requires less labor, less equipment, less capital, makes greater gains per hundred pounds of concentrates and reproduces himself faster and in greater numbers than any other domestic animal. As a consumer of by-products the hog has no rival. No other animal equals the lard hog in its fat-storing tendency. The most satisfactory meat for shipping long distances on train, boat, or wagon, and for long storage after reaching its destination is mess pork. There is no animal which produces more meat and meat products than the hog.

Pork finds ready sale because packers have discovered many ways of placing pork on the market in attractive and highly palatable form combined with most excellent keeping qualities. There is no other meat from which so many products are manufactured. Very near fifty per cent of the total value, in dollars and cents, of the meat and meat products slaughtered in the packing houses of

found today. Farmers who already raise hogs can produce many more for there is not much chance of producing meat this year in excess of the requirements.

More dairy farmers should raise hogs for they fit in especially well upon dairy farms where skim milk, buttermilk, or whey is fed upon the farm. A man who has skim milk is in a better position to raise pigs than a man who has none.

CORN FOR SHOW

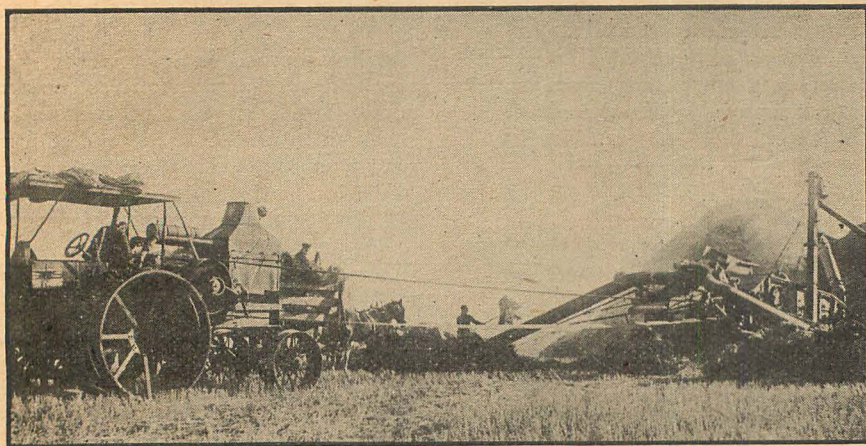
Show corn should serve two purposes. First, it should be good seed, and second, it should appeal to the esthetic.

For seed it needs to be sound, free from worm or mouse eaten kernels. Seed hurt in this respect is liable to rot before it comes up if there is excessive moisture. The ear should be matured to the extent that it is firm and solid. An attempt to twist the ear should produce a slight crack-

ing sound. Germs of immature ears are liable to be killed by freezing and thawing. A plump germ with an oily appearance is desirable. Uniformity in shape and size of kernels permits a more even stand. Four small kernels may be dropped in one hill

together in such combinations as to produce an artistic and pleasing effect.

Uniformity of the ears in all respects is desirable and should be given considerable attention. If the exhibit is for yellow corn, use yel-



Wheat in North Dakota costs this year from \$10.00 to \$1.00 per bushel to produce according to the yield, which varies from 0 to 30 bushels.

and two large ones in the next. This can partly be avoided by grading. However, ears with uniform kernels are preferable.

To properly select a ten-ear sample from a pile of seed corn is an art. A perfect ear is rarely found. Therefore ears with a greater or less number of imperfections must be brought

low ears. Throw aside the mixed ears. Do not pick nine red cobs and one white cob. Have all the ears as nearly alike as possible.

Experience in picking good seed ears that will ripen under their climatic conditions, and a knowledge of what combinations of characters to put together to produce a more perfect sample are essential to the selection of corn for the exhibit.—O. S. Rayner, Colorado Agricultural College, Fort Collins, Colo.

RAILROADS ARE WORKING TO STOP COAL SHORTAGE

Further measures were taken by the railroads' war board this week to overcome the threatened serious coal shortage by sending a committee of four members to eastern coal centers to confer with mine operators. These men expect to remain three weeks in an effort to have the fuel production stimulated to meet the needs of northwestern consumers.

The national defense board of the American Railway Association has adopted forced methods so that the public will not suffer lack of fuel next winter. The matter of securing ample

coal has been discussed in its various phases for several weeks by the Twin City sub-committee of the railways defense board. This resulted in securing cars to move the commodity as fast as it is produced.

Upon their return, the railroad committee will report to various commercial bodies. The carriers, thru their war defense committee, believe the conference now in progress will result in a vastly increased tonnage being shipped via the Great Lakes in time for rail shipment to various parts of the northwest before next winter.

THE FAMOUS NORTHCOTE FARM

Northcote Farm, the 26,153 acre agricultural and live stock domain of the late James J. Hill, has passed from the Hill estate. It was purchased by the Payne Investment Company of Omaha.

This great bonanza farm which lies in Kittson county, the extreme northwest corner of Minnesota, in the very heart of the far-famed Red River Valley, now is to be cut up into small farms for the homeseeker, just as the late railway builder would have wanted it disposed of. E. C. Leedy, Immigration Agent of the Great Northern Ry. will help select desirable settlers for this tract.

There had been many prospective buyers of this vast estate flatly turned down because of the steadfast position taken by Louis W. Hill, president of the Great Northern Railway, one of the heirs, who, impressed by the desire of his illustrious father, demanded two conditions be adhered to—first, that the purchaser of the estate should not sell more than 320 acres to any one person, and secondly that these tracts should be sold at reasonable retail prices. In this way Louis Hill has safe-guarded the wish of his father that the land shall pass into the hands of bona fide settlers.

Great interest always has been centered upon these broad acres because they were the personal selection of Jim Hill, who was recognized in the agricultural world as an eminent authority, the late Great Northern Railway chief selected the nucleus of

7HP WHITE Gasoline Engine

Here is a Bargain

This engine was in daily use in our plant until replaced by electric motors.

Just What You Want For GRINDING FEED, SAWING WOOD, PUMPING, SILAGE CUTTING, ETC.

Cost \$300 **\$70** Takes It

If interested address
North Dakota Farmer
Lisbon, North Dakota

BORING AND REAMING OF CYLINDERS

We rebores and ream all sizes of auto and gas engine cylinders fitting same with larger pistons and rings. We weld all Metals. Our machine shop is equipped to handle both large and small work. Send your next job to.

DAKOTA WELDING AND MANUFACTURING COMPANY

203-5th St. N. : : FARGO, NORTH DAKOTA : : Telephone 926

this great farm more than 30 years ago.

Mr. Hill long ago foresaw the possibilities of these lands for the production of alfalfa and diversified crops. Consequently many years ago he introduced alfalfa on this farm with the result that he had the largest alfalfa field in the entire Northwest, consisting of more than three thousand acres. The success of this alfalfa growing enabled Mr. Hill to give an actual demonstration of combining stock raising with the growing of small grains and practically maintaining the virgin fertility of the land.

POTATO DEPARTMENT

H. O. Werner, Secy. N. D. Potato Assn.

THE STORAGE OF POTATOES

The storage of potatoes of the main crop can be accomplished most satisfactorily thruout much of the United States in the dugout pit or potato cellar in some of its various forms of construction. No attempt is made to store potatoes of the early crop, since usually they are sold for immediate consumption.

While the dugout storage house is in most general use, concrete or masonry houses with frame superstructures are, perhaps, most satisfactory in cold climates. In some sections, especially in the South where drainage is poor, insulated frame structures built entirely above ground must be depended upon.

Purposes of Storage

The primary purposes of storage, it is pointed out, are to protect the tubers from extremes of heat and cold and from light. Account also must be taken of conditions of humidity and ventilation and of the size of the storage pile.

The temperature should be the highest at which potatoes can be maintained firm and ungerminated, and which will at the same time hold fungous diseases in check. Experiments of the department with artificially refrigerated storage indicate that 36 degrees F. is sufficiently low for all practical purposes and that in the earlier portion of the storage season a temperature of 40 degrees F. is just as satisfactory as a lower one except where powdery dry rot infection occurs.

All natural light should be excluded from potato storage houses because when the tubers are exposed to even modified light, they are soon injured for food purposes. A practical rule in regard to humidity is to maintain sufficient moisture in the air to prevent the wilting of the tubers and at

the same time to keep the humidity content low enough to prevent the deposit of moisture on the surface of the tubers.

If potatoes are piled in too large piles they may become over-heated and deteriorate. Six feet is a good maximum depth to which to pile tubers in bins, and the area covered by each pile also should be limited. A good plan is to insert ventilated division walls at intervals thru the pile or bin. These may be made by nailing relatively narrow boards on both sides of 2x4 uprights, 1 inch spaces being left between the boards. General ventilation for the whole storage house usually is accomplished thru ventilating shafts in the roof.

Methods of Storage

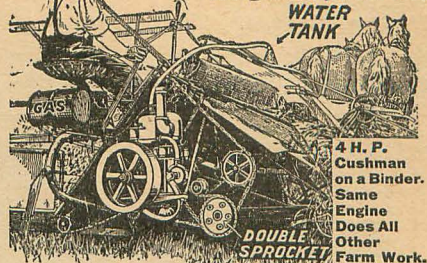
The possible ways to store potatoes, says the bulletin, are pits or earth-covered piles, in dugout pits or potato storage cellars, in insulated wooden structures, in substantial masonry or concrete houses, and in artificially refrigerated storage houses. The latter two methods are the most expensive. Pitting is the most primitive method of storage, but if properly done on well-drained locations is satisfactory in so far as the preservation of the potatoes is concerned. The chief drawback to pitting is that the potatoes are not always easily accessible in the winter.

Potato Storage Cellars

The dugout pit or potato storage cellar is probably more widely used than any other type of storage space. Fitted with water-tight roof it is especially popular in the central portions of the United States. In the arid and semi-arid sections a type with sod or dirt roof is in most general use. As a rule, the excavation for the cheaper structures of the dugout pit or cellar type when erected on level or nearly level land does not exceed 3 feet. The soil removed from such an excavation, particularly if the dugout is of any considerable size, is ample for banking the side and end

Saves 2 Horses On the Binder

Weights Only 167 Lbs.



Cushman Binder Engine

For All Farm Work

The 4 H. P. Cushman is the original and successful Binder Engine. Thousands are in use every harvest—saving horseflesh and saving grain.

It saves a team, because engine operates sickle and all machinery of binder, leaving horses nothing to do but pull binder out of gear; also takes away side draft. Therefore, two horses easily handle 8-foot binder in heavy grain.

It saves the grain, because it runs at uniform, steady speed, putting grain on platform evenly, allowing platform and elevator canvas to deliver it to packers straight, and thus it is tied without loss, saving a large per cent of the natural waste of binder.

It saves the crop in a wet season, because slipping of bull wheel or slowing up of team does not stop the sickle, and it never clogs. You can cut wet grain same as dry.

It saves time because you can move right along all the time in heavy grain without killing the horses, and with no choking of sickle, elevators or packers.

It saves the binder, because it operates at same regular speed all the time—no jerking of machinery by quick stopping and starting of team or when bull wheel drops into a rut. That's what tears a binder to pieces. With a Cushman Engine your binder will last twice as long. Write for book with complete description.

CUSHMAN MOTOR WORKS, 881 N. 21st St. Lincoln, Neb.

ROOFING

Yes Sir! That's what I sell from my 7 factories direct to you. The BEST roofing made at positively the lowest prices. I am a roofing expert—specializing in roofing materials and supplies—and I guarantee to save you money, give you a better roofing and a written guarantee.

65c Per Roll for the best one ply roofing, 108 square feet, nails and cement included. No matter what you need in prepared roofing, I can supply you direct at net factory prices.

Send for Big Roofing Book and FREE Samples and be convinced. Now is the time to cover your roof—so send for the book today, sure!

W. E. McCARRON & CO.
12 Dickey Bldg., Chicago
Formerly the Central Roofing & Supply Co.

WARNING
Don't buy a roll of roofing from anybody, anywhere, (including myself) unless you get a written guarantee. Don't take anybody's word about quality, make them prove their claims.
W. E. McCarron

These are 20 Year GUARANTEED ROOFS



We Pay Top Prices Always

For Cream, Eggs and Poultry

We Are Cash Buyers. No Commission Charged.

Our motto: "Correct Weight and Honest Treatment." Prompt return of Check and empties guaranteed. Prices and Tags sent FREE.

A Trial Will Convince You that it pays to ship direct to us. Our outlet unlimited.

FARMERS CREAMERY & PRODUCE CO.,
Minneapolis, Minnesota.



walls and also for the roof. The cost of construction may be greatly modified, according to the character of the location.

In the cheaper dugouts, where the soil is of such a nature as to remain intact it is allowed to form the side

and end walls, the roof being supported on plates resting on the soil and held together by boards or joists. This form of construction involves a deeper excavation and a constant element of risk from a cave-in. In the more expensive and substantial struc-

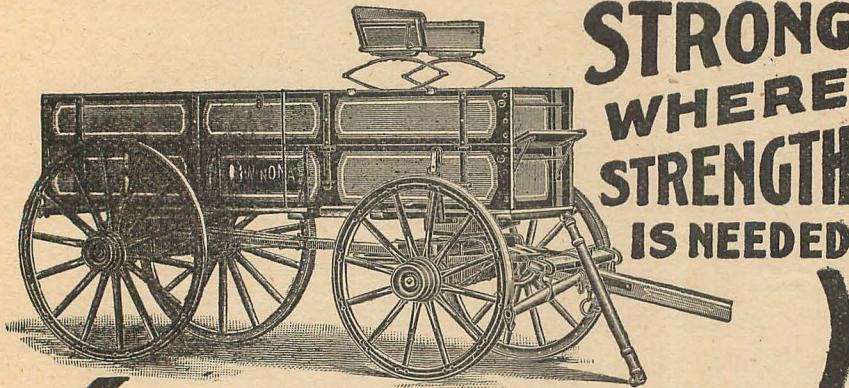
tures the side and end walls are built of concrete.

The Aroostook Type of Storage House

The Aroostook type of storage house, with concrete or masonry basement walls and wooden superstructure, seems to be distinctively a product of Maine, and so far as has been observed is not found to any extent outside of the state. It is an expensively constructed house and is almost always located on a sidehill or knoll in order that advantage may be taken of a ground-level entrance. That such houses have proved satisfactory to the potato grower in Maine is evident from the fact that practically no other style of potato storage house is in use in that state.

The Artificially Refrigerated Storage House

The artificially refrigerated potato storage house is as yet hardly in existence. The present use of this type of storage house is confined practically to the holding of northern-grown seed potatoes in cold storage for second-crop planting in the South.



**STRONG
WHERE
STRENGTH
IS NEEDED**

WINONA Wagons have extra protection at points of greatest strain. Outer bearing axles bring load up against wheels, preventing break-down and insuring light draft. Clipped gears. Bent and double riveted Felloes. Strongest Skeins and Poles. Re-inforced Hounds—Built-to-last Boxes. Iron Clad Hubs when ordered.

WINONA FARM WAGONS

STRONGEST and lightest running. "Good timber and bone dry" with highest grade ironing and quality painting. The wagons you can depend on to carry your heaviest loads without the annoyance and expense of frequent breakdowns.

Write for Catalogue F
it tells why Winona wagons lead them all.

Winona Wagon Company, Winona, Minn.

ENCOURAGE AND MAKE USE OF THE SPIRIT OF PLAY

Playground Games, 10 cts. Rules for playing the more common games of the school ground. Game of Times, 15 cents. A help in teaching and learning the tables and simple factoring. Davies Number Cards, 25 cents. All possible combinations. For all grades. In boxes. Westland Phonic Cards, 25 cents. Busy work for primary grades. An aid to sight reading. Fundamental Operations of Arithmetic, 15 cents. Invaluable for rapid work in numbers. Uncle Will's Magazine, The Rotary. 50 cents. Unique. Has personal element. 20th year. North Dakota Speller. 40th M. For 5th-6th, and 7th-8th Grades, 15 cts each. Trial, both 25 cts. Westland Educator, Box F. - - - Lisbon, North Dakota

STACK WHEAT!

If, by stacking the small grain, you enable America to spare more wheat to our Allies and at the same time raise the quality of your entire crop, isn't it worth while? This is the question farmers who want to do a welcome bit for their country are asking themselves.

Stacking grain means saving grain, and labor. Heavy storms rarely damage grain in the rick, but play havoc with the best constructed shocks. In rainy periods shocked grain is likely to sprout before the threshing outfit arrives. Green-covered shocks will mean that their owner has not done all he could to help win the war.

Small grain has to go thru the sweating process, either in the stack or in the bin. Grain that sweats in the stack is of superior quality. If the grain is sold soon after threshing the raiser gets the benefit of the increase in value.

Few farmers nowadays know the art of building ricks. Nearly every neighborhood, however, has one or more men who can stack grain, or at least show younger men how it is done. Many of these men remember when the bugle called to strife in our land. Doubtless they will hearken now to the call to stack the grain, that more food may be sent to our men in France.

There is patriotism in stacking wheat, no less than in stacking arms.

JUST PUBLISHED

How To Run An Automobile

By Victor W. Page, M. S. A. E.

Price \$1.00

178 Pages

72 specially made Engravings



This treatise gives concise instructions for starting and running all makes of gasoline automobiles, how to care for them, and gives distinctive features of control. Shows the control groups of all popular makes of automobiles and describes every step for shifting gears, controlling engine, etc.

It is impossible to get the greatest efficiency out of a car until you know every point in running, caring for and adjusting the machine. In this new book just the problems you are up against are solved in a way that you can easily understand, and so that you can immediately turn to your car and apply the knowledge.

A book every one has been looking for. Fills a real need among motorists, dealers, chauffeurs, repairmen and all who must handle different makes of cars.

ADDRESS: NORTH DAKOTA FARMER, : : LISBON, N. D.

Experiment Station Notes

Timely and Helpful Suggestions

RUN LIGHTNING INTO GROUND

Lightning will follow a wire fence. Stock are apt to stand in a fence corner or along the fence when it storms. If near enough to the fence that has been struck by lightning a number of animals are likely to be killed. The lightning can be run from the fence into the ground by running a wire No. 8 or No. 10 from each strand of the fence and into moist soil.

Near the buildings and where the stock stand a good deal these ground wires should be closer together than on the fence along which the stock do not congregate so often.

KILLING CANADIAN THISTLE AND SOW THISTLE

Canadian thistle and sow thistle are hard to kill as they have underground stems from which new plants are sent up. A piece of this stem if cut off and given the right conditions will form a new plant. The first step in the eradication is to mow the plants, then plow them under and disc the land as often as new shoots appear. Keeping the top from growing will in time kill the roots and underground stems. Growing a crop of corn in hills and cultivating thoroly both ways and hand hoeing the hills is another way of eradication. Getting rid of the patches of Canada thistle and sow thistle now will save a lot of work a little later.

A GOOD LICE KILLER

According to Farmers' Bulletin No. 801 Sodium fluorid powder is death on poultry lice. It can be dusted into the feathers so it will reach the skin. It should be applied to all parts of the body. It can be made into a solution one ounce per gallon of water and stirred well. Dip the poultry into it. The dipping method kills the lice quicker, better and more cheaply. The sodium fluorid has no bad effects on the skin but is a little irritating to the air passages. It is, however, very destructive to the lice.

MILLING AND BAKING DATA FOR THE 1915 CROP OF WHEAT

"Milling and Baking Data for the 1915 Crop of Wheat" is the title of

Bulletin Number 122 issued by the North Dakota Experiment Station. Special attention is given to the test weight per bushel and the way it became a part of the grain grading system now in use. Mr. Thomas Sanderson who did the milling work is the author. He also compares what the farmer receives for the wheat on the basis of the test weight grading and what he would receive if paid on the basis of the mill products.

DRYING CORN

Corn can be dried very successfully. It will retain its flavor. Many prefer it to canned corn. Boil the corn on the ear, first, then cut it off and spread in thin layers on trays with unpainted wire screen bottoms (pans and plates can be used) and placed in the sun and wind, or by placing in an oven slightly heated with doors open. The drying must be done fairly rapidly or the corn will sour. Corn is one of the most difficult vegetables to can. Drying the corn will save the cans for vegetables that cannot be dried so readily.

WHEN TO CUT SWEET CLOVER FOR SEED

In cutting sweet clover for seed it has been found that from one-fifth to three-fourths of the seed shatters. One way to reduce this is to cut the seed crop early. Some recommend cutting when three-fourths of the seed pods have turned dark brown to black. The field will have a brownish cast at this time. In some cases a delay of a couple of weeks in cutting after this time has resulted in as much as 90 per cent of the seed shattering. Boxes can be attached to the binder so as to catch a good deal of the seed that shatters. Many prefer letting the bunches lay as dropped by the binder or self-rake reaper for a week and then hauling direct to threshing machine instead of shocking it. The seed shatters less on a cloudy day.

HOW TO USE OLD PARAFFIN

Paraffin that has been used for covering glasses of jelly and preserves can be cleaned and used again. Often times it can be cleaned by washing with a brush. If this will not clean it, melt the paraffin and strain thru two or three thicknesses of cheese cloth.

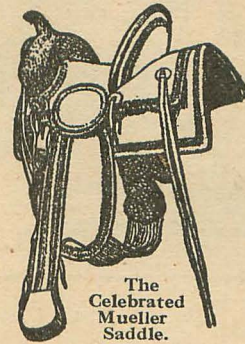
HANG ON TO STOCK

In case of shortage of feed for stock so that it appears that all cannot be wintered by all means keep the young stock. The good breeding stock should be kept even at some chance of securing feed. Dairy cows should be kept, but the mature steers and old cows—livestock that should be culled, should be the first to go. The weather conditions may change so that corn and millet will make a crop. Pasture can sometimes be secured on vacant land even tho it may require herding. Grain not good for making a grain crop should, if possible, be cut for hay rather than plowed under.

TO KILL QUACK GRASS

Now is a good time to kill quack grass. It cannot stand much in a dry season. For small patches cover with tar paper or fork it out. For a large area first mow it then plow it under and disc about once a week till fall. Sometimes it pays to follow the disc with the harrow. It will sometimes be found necessary to plow it again at the end of the season. Corn is a good crop to put on this land the following year. If there are any stray plants they can be dug out.

YOU SAVE from \$7.00 to \$15.00 on every Saddle



The Celebrated Mueller Saddle.

Send for our Free Catalog from Maker to Consumer

THE FRED MUELLER SADDLE & HARNESS COMPANY

1413 to 1419 Larimer Street DENVER, COLORADO



READ THIS

There must be a reason why there is such a demand for Justin's Boots. If you are going to wear boots, why not wear the best? Yours for the Best Cowboy Boots Made. Send us your address on a postal card and we will send you our catalogue, and self-measuring system.

GIVE US A TRIAL

H. J. JUSTIN & SONS
Mfrs. of Justin's Celebrated Cowboy Boots. NOCONA, TEXAS

CANCER



and Tumors successfully treated (removed) without knife or pain. All work guaranteed. Come, or write for free Sanatorium book Dr. WILLIAMS SANATORIUM 3023 University Av., Minneapolis, Minn.

FIELD-CROP INSPECTION

Now is the time to begin to look for seed for next year. Without good seed, crop failure is very much more liable to occur, especially if the conditions in the spring are adverse—so let "Good Seed" be the slogan.

Mr. Martin Hagen of the Agricultural College Plant Disease Survey and Seed Survey, who was in Lisbon recently, explained to us how the work in this connection is carried on.

The Division of Plant Pathology of the Experiment Station is cooperating with the Seed Laboratory in locating fields of grain, forage crops, potatoes, flax, corn, beans, etc., which may be of sufficiently high quality to be recommended for use as seed in 1918. Mr. Hagen will be glad to hear from

any farmers who wish to have their fields inspected. He has worked in the southeastern corner of the state, but is now on his way across the state, making stops in the following towns:

Enderlin	Valley City	Wimbledon
Carrington	Fessenden	Harvey
Minot	Berthold	Stanley
Ray	Williston	Alexander
	Arnegard	

On the way back these towns will be visited, and worked out from:

New Rockford	Hannaford	McHenry
Cooperstown	Amenia	Mayville
Portland	Aneta	Finley
Hope		Casselton

and possibly others. It is to be hoped that interested growers close to

these towns will cooperate with the field inspector, so that they will be able to get their good seed on the published state seed list next fall.

Growers who wish to have their fields inspected should make application to the State Seed Commissioner, Agricultural College, as soon as possible, as Mr. Hagen will try to make another trip over the same territory, or part of it, this fall.

The inspection work is done free of charge.

Food Administration

SPECIAL SERVICE FOR FARMERS

So loud has been the cry of "eat less" and "conserve the food supply" coming from Washington of late, that many persons have thought the Food Administration was not giving the matter of greater food distribution proper emphasis. This is by no means the case. Within the past few days there has been organized a special information service that is now doing everything in its power to furnish farmers with the facts that will better enable them to carry on their strategic part in the world conflict.

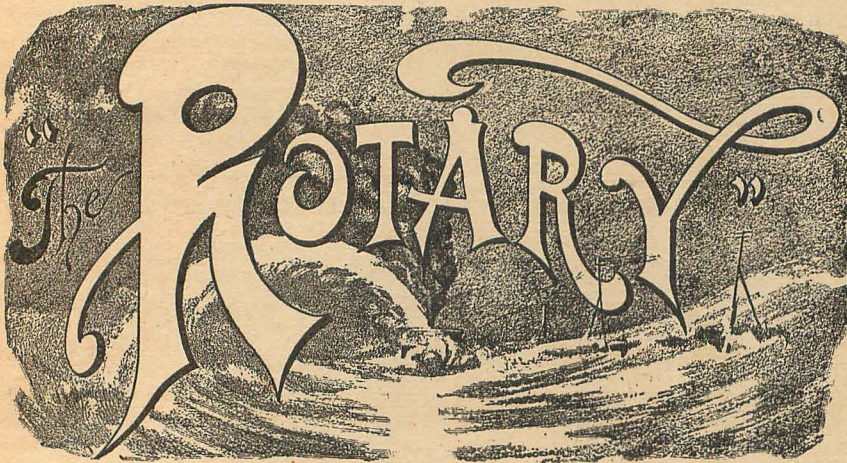
This new service is proceeding on the basis that the farmers do not need further urging to play their part in the food crisis, as some other classes do; that they are growing everything they can, and are anxious to cooperate with the Food Administration in every possible way. Instead of merely urging them to do more, therefore, the recently organized division will endeavor to furnish farmers with special information needed at this time to make their work most efficient.

Too every opportunity to bring the importance of food saving, and increased food production, to the attention of the people will be utilized, the new service will work mainly thru the farm papers. For this reason the special farm information service of the Food Administration is known as the Division of Farm Publications, with which the farm press has already shown a most willing desire to cooperate.

Several farm paper editors and writers are now devoting their full time to the work of the division, while the services of others are being "loaned" to the Food Administration by various papers. Some men and women now engaged in the farm press work are volunteer workers, "doing their bit" for the country.

These workers are preparing to make use of every source of agricultural

UNCLE WILL'S MAGAZINE



As the Rotary Plow Clears the Track for Traffic
So the Rotary Magazine Opens up the Avenues of Learning.

Hundreds Were Disappointed Last Year

Simply because the teachers or school boards failed to order The Rotary in time. Order now if you would be sure of the September number.

THE TWENTY-FIRST YEAR BEGINS WITH SEPTEMBER NUMBER

Single Subscriptions.....	\$.50
In Clubs of 3 or more.....	.40
In Clubs of 20 to one address.....	.35

School Boards may order 20 or more at 35 cents, and have them sent to the schools under their charge.

There is no greater incentive to the study of language and reading than Uncle Will's Magazine.

ADDRESS

THE ROTARY, BOX F, LISBON, NORTH DAKOTA

tural information in the country—the Department of Agriculture, agricultural colleges, and farm leaders and authorities everywhere—to obtain the facts that will help American farmers win the war. Coming directly from farm paper work, these men and women know how to write for the farm reader and will use every endeavor to furnish only trustworthy, practical information. In the Food Administration work are some of the leading agricultural authorities of the day, whose information and advice to farmers in our national crisis will be made available to farmers thru the Farm Publications Division.

Farm women, too, will receive attention from this information service. Cooperating with it is a large staff of women—domestic science experts and writers. These experts, who organized under the Conservation Bureau of the Food Administration, will furnish farm women thru the farm papers with suggestions for making their kitchens efficient, while conducting them in such a way as to leave the greatest possible amount of food for the soldiers and hungry peoples across the Atlantic. In a word, the Food Administration, thru the newly-started division, hopes to establish a condition of high efficiency on every farm in the land, in the home as well as in the fields.

"I had intended renting out and taking it more easy, but if I can help get humanity out of a starving condition I will feel the better for it."

These words, from a letter by E. S. Gilham, of Illinois, that has reached the Food Administration, are typical of the patriotic spirit that is urging on the American farmer to do his best. For him there is no thought of retiring as long as the world is hungry. It is the spirit that will win the war for the Allies and make the world safe for democracy.

Too many beginners in the poultry business commence by building air castles. They are inclined to rely too much on the experience of others and what they read in the papers. Some of them are not even fond of working among hens, but expect to hire all the work done. These people are the four out of five who conclude that poultry farming doesn't pay very well.

Eggs of the Mediterranean breeds will not hatch with the Asiatic breeds. The heavy, brown shelled eggs drew the moisture from the white shelled eggs, therefore the white shelled eggs cannot hatch. The same difficulty occurs with hen eggs and duck eggs set together; the hen eggs will not hatch.

Feed the Fighters! Win the War! Harvest the Crops! Save the Yields!

On the battlefields of France and Flanders the United States boys and the Canadian boys are fighting side by side for the World the freedom that Prussianism would destroy.

While doing this they must be fed and every ounce of muscle that can be requisitioned must go into use to save this year's crop. A short harvest period requires the combined forces of the two countries in team work, such as the soldier boys in France and Flanders are demonstrating.

THE COMBINED FIGHTERS IN FRANCE AND FLANDERS AND THE COMBINED HARVESTERS IN AMERICA WILL BRING THE ALLIED VICTORY NEARER

A reciprocal arrangement for the use of farm workers has been perfected between the Department of the Interior of Canada and the Departments of Labor and Agriculture of the United States, under which it is proposed to permit the harvesters that are now engaged in the wheat fields of Oklahoma, Kansas, Iowa, North Dakota, South Dakota, Nebraska, Minnesota, and Wisconsin to move over into Canada, with the privilege of later returning to the United States, when the crops in the United States have been conserved, and help to save the enormous crops in Canada which by that time will be ready for harvesting.

HELP YOUR CANADIAN NEIGHBORS WHEN YOUR OWN CROP IS HARVESTED

Canada wants 40,000 Harvest Hands to take care of its

13 Million Acre Wheat Field

One cent a mile railway fare from the International Boundary line to destination and the same rate returning to the International Boundary. High wages, good board, comfortable lodgings.

An Identification Card issued at the boundary by a Canadian Immigration Officer will guarantee no trouble in returning to the United States.

AS SOON AS YOUR OWN HARVEST IS SAVED, move northward and assist your Canadian neighbor in harvesting his; in this way do your bit in helping "Win the War."

For particulars as to routes, identification cards and place where employment may be had, apply to Superintendent of Immigration, Ottawa, Canada, or to

W. E. BLACK, Canadian Government Agent, Clifford Block, Grand Forks, N. D.

SEED WINTER RYE

We have a good supply of 1917 Amber Winter Rye which is exceptionally good quality and shows a high germination and purity.

WRITE FOR PRICE AND FREE SAMPLE

Fargo Seed House, Fargo, N. Dak.

When writing the advertisers kindly mention the N. D. F.

Reboring and Grinding of Cylinders

This is the time to fit up your steam engines and gas tractors for the coming season

We can rebores and grind your cylinders, fit new oversize pistons and rings, make and fit new crank pins, straighten shafts, bore and bush gears and clutches or do any kind of machine work. Refue boilers and replace stay bolts. We carry in stock all sizes of stay bolts, patch bolts, bracket bolts, rivets, boiler flues, stay-bolt taps and boiler taps, shafting, shaft hangers, cast iron pulleys, woodsplit pulleys. Write and let us quote prices on any work you have.

Craig Brothers, Fargo, N. D.

P. O. Box 295.

Telephone 554 W.

North Dakota Farmer

Entered as second class matter at the postoffice at
Lisbon, North Dakota

PUBLISHED EVERY MONTH

W. G. CROCKER : : PUBLISHER
Lisbon, N. D.

MANAGING EDITOR : W. G. CROCKER
ASSOCIATE EDITORS:
E. F. LADD J. H. SHEPPERD
O. O. CHURCHILL C. B. WALDRON
H. O. WERNER

Remittance may be made by draft, check,
money order, or stamps if it will accommodate.

Vol. 19 August, 1917 No. 2

How can we best serve you?

Plow early and disk thoroly.

There's a lesson on the cover page.

An ablebodied retired farmer these days belongs to the slacker class.

The real farmer must have a fair show. He is unwise who demands more.

A tin can is out of place on a dog's tail, unless that dog is a sheep killer, then go to it.

Start a flock of sheep. Buy western yearlings or two-year-olds, well built and having dense fleeces. Head the flock with a pure bred ram. Both may be purchased from breeders in this state. Make your purchases during September and October.

Breeders of dairy cattle representing seventeen states and offering five breeds of dairy animals will compete for \$8000 in prizes at the 1917 Dairy Congress to be held at Waterloo, Ia., October 1-7, inclusive. North Dakota should have a large representation.

Hogging down is becoming quite popular this fall. Help is very scarce and many a farmer will bid the hogs "help themselves." It will save much waste if a portion of the field is fenced off and the hogs kept within that enclosure until it has been thoroly cleaned, then move them to another portion.

According to the government's estimate North Dakota will produce a million more bushels of corn, 24 million more of wheat, 5 million more of oats, than last year, and double the amount of rye. The prices of these crops are double what they were last year, and in most cases the grades are higher.

This is a most critical stage of the livestock industry of the state. No animal, except a scrub, should be sacrificed. Better apply for aid to your banker than tear down what you have been building up for years. The shortage of feed may be the means of culling out some of the undesirables.

There is a seed shortage in many of the counties. In some sections the farmers will not have enough money with which to purchase seed for the 1918 seeding. A portion of the nation's war funds could be expended to good purpose in furnishing such farmers seed. They are willing to fight to feed the soldiers but they must have the "ammunition."

The "Little Country Theater Players of the Agricultural Colleges made a successful tour of the states of North and South Dakota, giving the play "Back to the Farm." They put on nearly 50 performances in 39 towns of the two states, and we are sure that wherever they performed there will result more contentment on the farm for the young folks and more consideration for the boys and girls by the parents.

Dr. James E. Boyle, of the North Dakota Experiment Station, has spent the past summer organizing potato associations thruout the state. The marketing of the potatoes will be under the direction of Charles Eastgate of Grand Forks, who is investigating carefully the markets of the central west. This arrangement will insure to the farmers of the state a fair market for their potatoes. Members may obtain sacks for fall shipment thru the association.

North Dakota has been honored by the appointment of President E. F. Ladd on the Fair Price Committee. This committee has been empowered to make a careful study of the wheat situation and fix a fair price to be paid by the Government. President Ladd and his associates on the committee have the confidence of every fair, unselfish citizen, and we believe their decisions will be acceptable to all who have the interests of their country at heart.

Messrs Smith Stimmel and W. J. Arnold have been doing genuine patriotic service thruout the state. Their plan for bringing the farmers and townspeople together should meet with hearty endorsement. Come, let us be on guard for our own and our country's welfare. Every suspicious character should be carefully watched,

and searched for weapons or for booze by sheriffs and their deputies regardless of proclamations or opinions, public or private. This state as well as the world must be safe for democracy.

Five hundred Traill County farmers have organized for the purpose of fixing the price paid for farm labor this season, the members being pledged to pay no more than \$3 per day for harvesting and not more than \$3.50 for threshing. In some sections of the state men are demanding \$4 for a 10-hour day and extra pay for over time. Fortunately, the young men of the towns are coming to the rescue by going into the harvest field, thus strengthening the bond between country and town.

Secretary of the Treasury William G. McAdoo has proposed a plan by which the lives of the soldiers will be insured by the Government. This plan has been approved by the President, and there is every probability that it will be enacted into law. It provides for insurance against death and total disability; indemnity against injury and disease; re-education of injured men; and an allotment for dependents. This is a great improvement on the old pension system and will meet the approval of those who are giving up their husbands and sons.

The mails are burdened with literature from those who oppose the appointment of Herbert Hoover as food administrator, claiming that the farmer's market has been destroyed and that he is at the mercy of one man. All are being urged to wire the members of the Fair Price Committee to name an exorbitant price for wheat. The members of that committee are competent business and professional men. Let them alone. Their deeds are not irrevocable. Don't think for a minute that the price of wheat for the entire nation will be based upon the cost per bushel on land that has suffered by drought or tornado in this state. "Be just and fear not."

We are in receipt of a communication from the postmaster at Des Moines, Ia., requesting that all letters addressed to men located at Camp Dodge Cantonment, bear the name of the state from which the men come; thus, if a man's company is not known, the address should read,

Private John Jones,
Of North Dakota,

Camp Dodge, Iowa.

or, if the company and regiment is known, the address should read,

Private John Jones,
A Company, 1st Infantry,
Camp Dodge, Iowa.

Livestock Department

FARM AND STOCK NOTES

N. J. Shepherd

On a diversified farm there is seldom a failure.

Neither hunger nor thirst helps increased thrift.

Breed alone does not determine good breeding stock.

There is no education like the doing of a thing.

Quality is more important than size in breeding stock.

All bred excellence must be founded on constitutional vigor.

Stock raising well managed increases the yearly crop production.

An up-to-date business farmer studies the market and plans accordingly.

Growth well interfered with seldom prospers as well afterward.

A business farmer will adopt labor-saving machinery wherever practicable.

Failures often teach more than success that comes with no effort.

It is not big gains that pay so well as economical steady gains.

Livestock on the farm will turn unmarketable feeds into money.

Animal comfort means better profit, for it means more steady development.

Steadiness in work is a great element of dispatch and thoro accomplishment.

The manure that goes directly to the land is always the most valuable.

There is a more equal distribution of wealth among farmers than among any other class.

The land that will grow rank weeds will grow good crops if handled right.

A variety of feeds will give longer and cheaper gains than will any single feed.

In a dairy cow it is as necessary to be a good milker as a good feeder.

The productiveness of the acre of land is a most important factor in profitable agriculture.

All feeds to sustain life and furnish material for growth must contain mineral matter, protein and carbohydrates.

Anything that will add to the stock's comfort, health or thrift will make the feeding operations more profitable.

Distrust the things that come easy: that which costs nothing is usually worth its cost and no more.

Learning by mistakes is a sure way but it's pretty expensive unless you

let some one else make the mistakes.

In applying manure with the spreader it is put on uniformly and all parts of the field are equally benefited.

Feed a good variety of food but avoid sudden changes. That is, do not change the whole ration at any one time.

Anything whether farm or factory that shows thrift and neatness is enhanced in value in proportion to the amount of work done.

The business farmer prefers that type of animal which will bring him the most money for the least expenditure of time and expense.

Where any food deficient in fat is fed to the stock a quantity of linseed meal should be added to balance up the ration.

The buyer usually has definite ideas as to what he wants, to fill his purpose. The farmer in order to be practical must conform to that demand.

To have quality in the dairy products there must be quality in the dairy cow and also in the man who feeds and cares for the cow.

The farmer who reaps a profit from his land by making efficient machinery, profitable live stock, and trained help work for him is on the road to success.

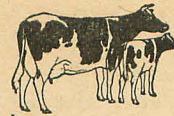
It is just as essential to know how to keep a cow at her best as it is to know how to build her up to her full capacity.

Manure is ready to go to work where it is put and the way to put it to work is to get it out on the land and the sooner the better.

From the viewpoint of economy we should never let the growth of any young animal lag, as each succeeding pound of growth up to maturity costs more than the next preceding point.

Pure breeds breed even, are more uniform in color, have more style and finish. They feed quicker, mature or develop earlier, with less fat than most grades. This makes them more profitable for the farmer and feeder to grow and feed and naturally they are better sellers.

To reduce the cost of stock, the most effectual method is to reduce the time required to grow it to proper maturity. The sooner an animal can be got to market the less will be the bill for its food of maintenance which is the great factor in its cost.



Purebred Registered HOLSTEIN CATTLE

Fifteen thousand dollars in prize money for milk and butterfat production, was distributed among breeders of registered Holstein-Friesian cattle during the year ending April 30, 1916. The official supervision, by the Advanced Registry Office of the Holstein-Friesian Association, of all regularly conducted tests, and the award of liberal prize money have proven a mighty stimulus and an educational factor of great value, in the promotion of interest and progress in the breeding of Holstein cattle.

Send for FREE Illustrated Descriptive Booklets
Holstein-Friesian Association of America
F.L. Houghton, Sec'y Box 267, Brattleboro, Vt.

ENVILLA STOCK FARM

Cogswell, N. D.
Will quote you special prices at any time on Angus Cattle, Feeding and Breeding Sheep, Shetland Ponies, Duroc Jersey Hogs, Wolf Hounds, Collies, Rat, Bird Dogs and other breeds, Angora Cats. All varieties of chickens, turkeys, geese, ducks, guineas, pheasants, rabbits, ferrets, Pets. Live Foxes, Skunks, Mink and Badgers.

Bixby's Red Polls

My herd bull, J. D. Merryweather, No. 24396, is the son of J. D. Millie, A. R. Grand Champion cow at Minnesota and Montana, in the 1915 show-ring and won the milk and butter contest with Guernseys, Jerseys and Brown Swiss competing with records of 600 pounds butterfat. J. D. Millie weighed 1280 pounds at thirty months old, and is full sister to the World's Champion two-year-old heifer.

J. S. BIXBY, : : LISBON, N. DAK.

Pleasant Ridge Stock Farm

has some first class D. S. Polled Durham Bulls for sale. Price reasonable.

H. A. STRUTZ, Prop.
Thompson, : : : : North Dakota

A. R. BRED BULLS PRICED TO SELL
We are completely sold out of RED POLL bulls for the present but are offering a few choice GUERNSEY bulls, outstanding individuals of serviceable age, at from \$100 up. Write for folder describing the remarkable show ring winnings, and production records back of our herd.
Jean Du Luth Farm, Duluth, Minn.

Holstein Calves

10 heifers, and 2 bulls, 15-16ths pure, 5 weeks old, nicely marked and from heavy milkers \$20.00 each, crated for shipment anywhere. Edgewood Farms, Whitewater, Wis.

REGISTERED Polled Durham Bulls. One is two years. Others 3-4 months old, and Oxford, Schropshire, and Rambouillet Rams. (All Registered) Some of these Rams were first and Champion at Grand Forks and Fargo Fairs this year. The Pleasant Grove Farm, Reynolds, North Dakota, R. E. Strutz, Proprietor.

PERCHERONS

If you want a real good young stallion or mare you should come to my barn. You can buy at a lower price at the barn than anywhere else. All home raised and used to Dakota conditions. A square deal guaranteed.

Wm. Steinbach, : : New Rockford, N. D.

Now is the TIME and this is the PLACE to buy

Shetland Ponies

FOR THE CHILDREN

Write your wants to
DR. J. A. H. WINSLOE, COOPERSTOWN, N. D.

CARE OF SOWS AND PIGS

Preparedness at Farrowing Time Is Money Saved—Proper Handling Prevents Losses.

Farmers who intelligently feed and care for their pregnant sows, so as not to overload them with fat, but instead give them feeds for the development of bone and muscle, are on the right road toward the production of strong, healthy litters. Their preparedness program, however, does not end here.

Two weeks before farrowing the sow should be put into a farrowing pen so that she will become acquainted and contented in her new quarters. The farrowing pen should be dry and free from drafts. Provide the pen with a guardrail made of 2 by 4 inch planks set 8 inches from the wall and 8 inches from the floor to prevent the sow from crushing the pigs against the wall. Use only a small quantity of bedding; leaves or straw are preferable. See that the sow has plenty of fresh water.

It pays to keep the sow quiet. Assistance at the time of farrowing should be at hand if needed, but the sow need not be helped if she is getting along well. In cold weather put the newly born pigs in a well-warmed basket, and after farrowing is over the pigs should be placed with the sow, care being taken that each one gets to a teat. When the afterbirth is passed, it should be removed from the pen at once and burned or buried.

After farrowing, the sow should have nothing but water and a little thin slop for the first day. The feeding for the first three or four days should be light, and the time consumed in getting the sow on full feed should be from a week to 10 days, de-

available give them some meal and plenty of pasture. In about 8 or 10 weeks the pigs will have practically weaned themselves. After they have been successfully weaned the most perplexing job is over.

By putting into practice the essential points above mentioned the number of pigs raised to weaning should be increased. Hogs never fail to respond to good care. Kind treatment always means contentment, with its corresponding profits.

ANNUAL MEETING OF THE NATIONAL LIVE STOCK SHIPPERS' PROTECTIVE LEAGUE.

The National Live Stock Shippers' Protective League will hold its first annual meeting at the Stock Yard Inn, Chicago, Illinois, on Friday, August 24, 1917, at 10 A. M.

This association was organized about a year ago for the purpose of amalgamating all live stock shipping and producing interests of the country for general protection in matters of transportation and legislation.

At the time of organization, there had been ordered by the Interstate Commerce Commission, a general investigation covering the entire country, of all rates, rules and practices bearing on live stock and live stock products. Much work has been done and further progress is being made in preparing exhibits and securing data for the defense of the live stock shippers in this case.

The meeting will have for its consideration the general election of the Executive Committee, and officers, and a portion of the day will be allotted for open discussion of matters of interest to the live stock industry.

It is therefore hoped for the mutual benefit of all in this line of industry to have a thoroughly representative convention for the purpose of strengthening this organization, and its members in this great and beneficent work.

Edw. F. Keefer, Secretary

REQUIREMENTS OF A DAIRY RATION

A. C. McCandish of the Iowa Experiment Station

The main object in feeding cows is to get the largest and most economical milk production. To do this it is necessary to know how to compound a ration. This is not a very difficult proposition when the composition, properties and prices of the various feeds available are known. In compounding a ration the following points

THE TALE OF A GROWING PIG

If you want to burn the road,
Buy a pig.

If you want to raise the load,
Buy a pig.

O, he's little, but he's wise,
He's a terror for his size,
And he's quick to advertise—
Buy a pig.

If you want the cheapest board,
Buy a pig.

If you want to own a Ford,
Buy a pig.

He is solemn but he's fat,
And he knows just where he's at,
And he always comes to bat—
Own a pig.

O, it's really somewhat hard—
Keep a pig.

That he has to end—in lard—
Keep a pig.

He makes sausage, ham and sich.
Pickled feet and bacon flitch,
And he makes his owner rich.

Keep a pig!

—Chas. I. Bry, Colo, A. C.

pending on the condition of the sow and the size and thrift of the litter. It takes plenty of sow's milk to make healthy, growing pigs. If the pigs begin to scour, feed the sow less and give her plenty of strong limewater.

It is very necessary that the little pigs have plenty of exercise and all the sunlight that can be given them. Do not allow the pigs to run out during a cold rain. If possible, provide green feed or roots. These keep the sow healthy and cheapen the ration. Encourage the pigs to eat grain after they are three or four weeks old. Build a creep for them so they can feed alone. At this age feed for bone and muscle. Give them all the skim milk you can. If skim milk is not

CLASSIFIED ADS.

One Cent a Word

Small advertisements will be classified under appropriate headings at the low price of one cent a word for each insertion. Cash must accompany all orders. Each initial or number must count as one word TRY IT HERE.

HOLSTEIN AND GUERNSEY HEIFER AND BULL CALVES. Choice selected promising dairy calves, practically pure Holstein and pure Guernsey, but not registered, nice color. \$20.00 each, all express paid to any point in North Dakota and adjoining states.

Order two, you will be so well pleased you will want more.—Meadow Glen Yards, Whitewater, Wisconsin.

WANTED—To hear from owner of farm or unimproved land for sale. O. K. Hawley, Baldwin, Wisconsin.

SCHOOL GLASSES SPECIAL PRICES
Will visit any town on request. C. G. MUGG
Optometric Specialist Grand Forks, N. D.

WANTED—Old false teeth, any condition. I pay \$2 to \$16 for full sets, parts in proportion. C. A. Wright, Hartford City, Ind.

WANTED—To hear from owner of farm or unimproved land for sale. O. K. Hawley, Baldwin, Wisconsin.

MISSOURI AUCTION SCHOOL
FREE CATALOG KANSAS CITY, MO.

WANTED. Live Foxes, Skunks, Mink and Badgers, any time.
Envilla Stock Farm, Cogswell, N. D.

Send for free list of Bargains and Exchanges in Farms, lands, businesses, any kind, anywhere.
Western Sales Agency, Minneapolis, Minn.

Wanted to hear from owner of good farm for sale. State cash price, full description. D. F. Bush, Minneapolis, Minn.

If you have livestock to sell, you can reach a buyer thru the ad columns of the N. D. F.

must be considered: palatability, variety, bulk, succulence, effect upon the system, balance of nutrients and economy.

Palatability

Palatability is one of the most important points to consider in formulating a ration for dairy cows. If the feed is not palatable the cow will not eat as much as she really requires and consequently will lose weight or decrease in milk flow, or both. Unpalatable feeds will often throw cows off feed. Moldy or damaged grain and badly weathered hay are unpalatable. Certain feeds are naturally unpalatable and they should be fed only in limited amounts and mixed with other feeds. Some cows have distastes for certain feeds and where the highest production is aimed at,

other nutrients, but also on the presence of certain substances which are but little understood, and are deficient in some feeds. By giving a variety of feeds the presence of these essential constituents, or "vitamines," is practically assured. It has also been found that all proteins are not of like value in feeding and that sometimes a mixture of two proteins is more efficient than either of the two alone. This is another argument in favor of variety in the ration. The dairy cow, unlike the beef steer, is fed for successive long periods and so must have a varied ration.

Bulk

Unlike the hog, the cow has a large roomy digestive tract that is built for the handling of rough feeds. The cow digests her feed to best advantage

Effect Upon Digestive System

The effects of feeds on the digestive system of the cow vary considerably. If a ration is to give best results it should be cooling and have a slightly laxative effect. Succulent feeds in sufficient quantity have beneficial effects, but it is well, especially where a large amount of grain is being fed, to see that the constipating and heating effect of feeds like cottonseed meal is neutralized by feeding cooling ones like wheat bran and oil meal.

Balance of Nutrients

For the best production a cow must be supplied with sufficient digestible food nutrients—protein, carbohydrate, fat and ash. A large amount of nutrients in the feed is not all that is required, however, as the relative proportions or balance of the nutrients should be right. For example, a liberal ration will not give the best production if it is deficient in protein and contains too many carbohydrates and fats. Similarly, a ration that is liberal but has too much protein will usually be uneconomical.

This problem of balance of nutrients has received much attention and feeding standards have been proposed by several investigators in this country and abroad.

The energy requirements are much simpler to use as a standard than the carbohydrate and fat requirements, and are probably more accurate. When substances are burned they supply definite amounts of heat, and when used for heat production in the animal body they supply similar amounts of heat. The food substances can be used in the body for the production of forms of energy other than heat, but their heat producing power is a convenient standard of comparison. The therm, or unit of heat measurement, is the amount of heat required to raise the temperature of 1000 lbs. of water about 4 degrees F.

According to the Armsby standard the maintenance requirements of a 1000 lb. animal are .5 lbs. digestible protein and 6 therms net energy value per day. As the maintenance requirements of cattle are figured proportional to their live weight, the requirement for any animal can be calculated from the above standard if its weight is known.



The Last Helper on the Farm to Part With.

the tastes of each cow should be catered to by individual feeding. The preparation of the feed has in some cases quite an influence on its palatability, for instance cracked corn, and ground oats are more palatable than the whole grains.

Variety

Frequent changes in the ration are not conducive to the best work on the part of the cow and as she soon tires of a ration consisting of only two or three feeds it is well to have a variety of feeds in the ration. It is best to feed at least two varieties of roughage, the first choice going to corn silage and alfalfa hay, and the grain ration should also contain a variety of ingredients. A mixed ration like this is much more palatable than is a simple one.

It has lately been found that the value of a feed depends not entirely on its content of digestible protein and

when her ration is bulky as the bulky parts of the feed keep the small particles of grain apart and thus allow them to be thoroly acted on by the digestive juices. The hay and silage should not constitute all the bulk of the ration as part of it can profitably be supplied by such feeds as corn and cob meal, ground oats, wheat bran and distillers' dried grains.

Succulence

A succulent ration has many beneficial effects. It supplies part of the large amount of water required by milking cows, increases the palatability of the ration, and has a laxative and cooling effect on the cow's digestive system. In the early part of the summer, pasture grass provides the necessary succulence but in the later part of the season it should be supplemented with corn silage or soiling crops; in winter silage is the most economical succulence.

Level the feet of the horse with a rasp. Long toes start ringbones.

Shoes should be reset every four or five weeks.

Do not require the tired horse to stand on an inclined floor. He will not lie down and rest as he should.



Poultry Department



FEED AND FEEDING

Michael K. Boyer

There is probably no theme in poultry writing that has been handled more extensively than the one on what we shall feed, and how we shall feed it. Likewise, there is hardly a subject in poultry lore upon which so many differ. It is not the aim of the writer to criticise methods, or to advance anything superior to what we already have. I wish merely to have a talk with beginners, and to point out the necessity of certain articles in the bill of fare.

Every mash should have a double proportion of bran in it. A favorite mixture is bran 2 parts; cornmeal, middlings, ground oats and meat scrap, one part each. All by weight. In cases of loose bowels, it is always best to cut down the supply of bran and increase the middlings, or second grade flour. And when it is noticed that the fowls are costive, increase the supply of bran and decrease the amount of middlings.

Clover hay should be fed in the mash during the winter. It is a bulky food, and contains a large proportion of lime. Cases of soft-shelled eggs are very rare when cut clover hay is fed. It should be given scalded. Fill a pail with cut hay and on this pour boiling water. Cover the vessel with a board, so that hay can steep for an hour or more. Or, it can be cooked in a boiler for about an hour. When ready for use, pour off the tea on ground grain (bran, corn-meal and ground oats—or whatever you use in the mash). After the grain is mixed up thoroly add the clover hay to the mash. This will practically take the place of green food, and is one of the best articles to use during the winter. The second crop (rowen), cut in half-inch lengths, is best.

Green bone, cut up with a bone cutter, is also a valuable article of diet. The green bones are those with meat on them, which are generally thrown aside by butchers. They can be purchased for almost nothing. By having a good cutter, these bones will be cut up fine, and are not only relished by the fowls, but are of untold value to both growing stock and laying hens. Cut bone can be fed alone, two or three times a week. About one pound of cut bone to sixteen fowls is a good

measurement. Grit should always be within reach of the fowls. Broken stone is best, about the size between corn and wheat; not larger than the former, or smaller than the latter. But as the commercial grits, are cut to suitable size, and are hard and sharp, and at the same time very cheap, it will pay better to buy the grit instead of wasting time breaking stone or crockery. It is not always best to use crockery, as the glaze on it has been known to give blood poisoning. It is a mistake to think that oyster shell will answer for grit. It is

be given fowls at least every other day.

Of whole grains, wheat stands at the head. It is a well-balanced food, followed by barley. Corn and buckwheat are also valuable articles for a change, but both being of a very fattening nature should be fed only as a variety. The scratch feeds put up and sold by every feed dealer, are of great value. Exclusive feeding of corn produces over-fat, and a fowl in that condition is subject to many diseases. Experts who have given the subject close attention, declare that most cases of "cholera" are cholera in fact only, in one case out of ten, hardly that; that liver disease, indigestion, bowel troubles, etc., are troubles (symptoms of which closely



Some of the Most Ardent Poultry Fanciers are the Kids.

not hard enough for that purpose. Oyster shell, however, should always be before the fowls, so they can help themselves at will. The lime in the shell is important in the manufacture of eggs.

Charcoal is helpful to the digestion. Fowls crave it. It can be bought in granulated form, and should be placed within reach of the stock. If the powdered form is used, it can be mixed with the mash. Charcoal should

resemble those of cholera) are due to exclusive feeding of corn.

Cooked vegetables are also valuable, but care must be taken that they are not too liberally fed, so as to cause looseness of the bowels. The manner of feeding, too, is an important item. Mash in the morning, just enough to satisfy hunger and make the fowls hustle about for more; whole grain at noon, such as millet or wheat, scattered among several inches of cut hay

or straw, barn floor sweepings, leaves or other litter. At night whole grain, like wheat, corn, barley, or whatever is used. The secret is to keep the fowls busy.

By making this subject of feed a study, and by closely observing the results of feeding certain articles, it will not be long before we can secure a scientific method which will bring us the best results.

Another matter under this head should be mentioned. It is to always feed the mash in troughs, and to have the troughs large enough so that the stronger birds cannot crowd out the smaller or weaker ones. Very often the best hens we have are crowded out by the bullies of the flock, the result being that they are underfed, while the bullies are overfed—two extremes that must be avoided, if possible.

Lastly, see that there is always a good supply of fresh water on hand. During cold weather, temper it with hot water, so that it will become lukewarm.

LEGHORNS PRODUCE EGGS AT LESS COST

Leghorns produce eggs cheaper than hens of the general-purpose breeds—Plymouth Rocks, Wyandottes, Rhode Island Reds, and Orpingtons. This fact, which confirms the belief and experience of commercial poultry farmers, was one of the results obtained in a rather extensive feeding test recently reported by poultrymen of the United States Department of Agriculture. Because they lay as many or more eggs, eat only about 55 pounds of feed per head as compared with 70 to 85 pounds eaten by the general-purpose breeds, and because their egg yield very materially exceeds that of general-purpose breeds during their second and third laying years, Leghorns, the specialists say, undoubtedly are more profitable to keep for the production of eggs only.

In this test the feed cost of a dozen eggs for one of the Leghorn pens was 7.34 cents in 1913 while the average cost of all the pens of the general-purpose breeds was 10.6 cents. In 1914 the feed cost of a dozen eggs for the same pen of Leghorns was 8.7 cents as against an average cost of 15.1 cents for the second laying year of the general-purpose pens. During their third laying year the cost of a dozen eggs was 8.8 cents compared to 18.6 cents for the general-purpose fowls. The total value of eggs per hen over feed cost in the Leghorn pen for three years was \$6.84 against \$4.30 for the general-purpose hens. The highest egg production obtained

in any of the feeding experiments up to 1915 was by a pen of Leghorns which laid 157.6 eggs per hen, at a feed cost of 6.7 cents a dozen.

The Leghorns produce smaller eggs than the general-purpose breeds. The average weight of the eggs of a pen of Leghorns during the first laying year was 1.42 pounds per dozen as against 1.53 to 1.58 pounds for the other pens. However, Leghorns laying eggs weighing 1.50 pounds per dozen or even more, the specialists say, have been selected and bred by many poultrymen. An examination in May, 1915, of 500 eggs from 3 Leghorn pens showed that 31 per cent weighed more than 2 ounces a piece, or 1.50 pounds to the dozen.

The value per dozen of the eggs produced by the Leghorns was from 1 to 3 cents less each year than the eggs of general-purpose hens. This difference is due to the fact that the general-purpose breeds are better winter layers than the Leghorns, while the latter give a higher production in the spring and summer. Very few Leghorns become broody, which probably materially affects their egg yield as compared with the general-purpose breed. Better fertility in the eggs, especially with stock confined to the yards, is more often secured with Leghorns than with the general-purpose or any of the heavier breeds.

The next Annual Show of The Ransom County Poultry Association will be held at Lisbon December 10th to 15th. Judge E. G. Roberts, of Fort Atkinson, Wisconsin, has been secured to judge the show.

The cause of the droppings drying at the vent is due to a cold the chicks received shortly after being hatched. Either too strong a heat in the brooders, or the chicks were allowed to range too far from the brooders for the first few days.

There is no nutriment in old bones. It is nothing more than grit to fowls. Green bone, fresh from the butchers, is not only relished by the hens, but in it they find an excellent material for making eggs. Where green bone is not available, the commercial beef scrap is a first class substitute.

The best way to get a house rid of mites is to spray it with some coal tar product like zenoleum, or Carbolenum. Paint every crack and crevice in the building; also all thru the nests and under the roosts. Repeat every week until the enemy is routed.

There are three distinct varieties of

Indian Runner ducks, the Fawn, White and English Penciled. It is not unusual to get green shelled eggs from ducks. It is no sign of impurity. The English Penciled variety is probably the oldest variety. It is not advisable to pick the feathers of live ducks.

The analysis of skimmilk is 2.9 protein, 5.2 carbohydrates, .3 fat. Beef scrap has 58 protein, with 32.9 fat. Therefore it will be seen that milk can serve only as a "makeshift" for beef scrap. Where both can be fed (milk for moistening the mash and meat for mixing in the mash) great benefit will be derived. To feed milk to the exclusion of animal food will not be supplying the amount of material so necessary in making eggs.

The sex of Indian Runner ducks at ten weeks of age, can be told by watching them when about to be fed. The ducks will give a loud quack, while the drakes will give a noise like a low whistling quack. Or, if one catches a duck it will give the loud, harsh noise, while in the case of the drake there will be the aforesaid whistling sound.

A good mating for breeding is four females to one male.

BIG MISSOURI ROSE COMB RHODE ISLAND REDS. Three choice pens. Five eggs from each pen for \$1.50. Blue Ribbon Strain, heavy winter layers. J. C. Guyer, Mandan, North Dakota.

PURE BRED S. C. Buff Orpington Eggs for hatching thru May and June, \$1.25 per 15. Mrs. Lydia Skeels, Westby, Mont., Box 72.

EGGS for Hatching from our prize winning Rose Comb Brown Leghorns, Rose Comb Rhode Island Reds and Single Comb Black Minorcas. \$2.00 per 15. Peter H. Levey, Fountain, Minn.

EGGS. PURE BRED S. C. W. Leghorn. Golden, White, Partridge, and Silver-laced Wyandottes. Rose Comb Island Red. Guineas. Runner and Pekin Ducks. Setting \$1.25; 100, \$6.00. B. Turkey, nine \$2.50. All eggs prepaid.

JOSIE ZENG
Walnut Grove, : : : Minn.

White and Columbia Wyandottes, Light Brahmas, and S. C. White Leghorns Over 30 years a breeder. Stock and eggs for sale. **MICHAEL K. BOYER**, Box 27, Hamonton New Jersey.

Hatching Eggs from a good strain of Pure Bred S. C. Rhode Island Reds, 15 for \$1.50; also a few Cock Birds and Cockerels for sale. E. N. Hedahl; Mercer, N. D.

FOR SALE. Well Bred Up R. C. Reds. First prize winners; cockerels, \$1.25. Mrs. John Henderson, Br 228, Beulah, N. D.

PUREBRED BARRED PLYMOUTH ROCK eggs. One setting of 13, \$7.75 100 eggs, \$4.50 prepaid. Otto L. Albertson, Nunda, S. D.

White Langshan eggs, \$3.50 setting, F. Runner Ducks \$1.50 setting. Selma Shanander Dayton, Iowa.

FOR SALE. Silver-Laced Wyandottes. Eggs and baby chicks Mrs. Thos. Brady, Lansford, N. D.

Quality White Rocks

Hatching Eggs and Stock in season. We have the Best. O. A. Barton, Valley City, N. D.

School and Home

OUR COUNTRY'S SERVICE

By Chore Boy

First what is our country? It is you and I, just a group of individuals. In our country's service then simply means that you and I shall do our part a little better than ever before. If you raise crops it means producing more or better crops. If I am teaching, it means using greater care in imparting information and setting a better example for those about me in a moral and spiritual way.

In our country's service does not mean experimenting and trying new things, but doing the thing I know best how to do, producing the crops that I know best how to produce, teaching the subjects I know best how to teach.

In my country's service also means sacrifice. It may not be real sacrifice but a giving up of some things that seem necessary to us while something else might answer fully as well.

For instance, white wheat bread is looked upon as a necessity yet seven hundred million people get along without this kind of bread. Instead they use bread made from kaffir corn, millet and feterita. The wheat crop is short this year, yet England, France and other countries need some of our wheat. If we can use some other grain to a certain extent in bread making, it will release that much wheat. Corn bread can be used to good advantage and in doing so we will help our country help the countries that are looking to us for food, and this will help these countries the better to fight the battles that we may otherwise have to fight alone. Cutting out waste is another way to save food. For instance, if each one wastes one-tenth ounce of butter each week the amount for the U. S. will be 32,000,000 pounds a year which it will take 200,000 cows to produce. Or, in other words, the feed fed that many cows as well as the labor used in caring for them would be thrown away. When you help yourself to butter the next time do not take enough so any is wasted. The same is true of all things that come to the table, do not take so much that some will be left on the table to be wasted.

On the farm this is not as bad as in town as what is left on the plates can be fed the pigs and chickens, but it makes expensive food for livestock.

Producing and saving food are two ways of serving our country. Another way is by being loyal, by supporting the men who have the difficult work of managing affairs as well as the men who are already in France and who are getting ready for going to France.

It will mean much to all of these to know that the folks back home are appreciating the work and supporting them in their hard tasks. Everyone should do his bit in making our country more capable of doing the big part that is expected of it. Every one can help even tho it be but to prevent waste.

Another way to help is by supporting the Red Cross and other organizations that can do a service that we might want to do but can not. The Red Cross will extend aid to those who need it in the fighting zone, aid just at a time when it is needed. It is your dollars that keep it going in its work of mercy.

It is a privilege to be a citizen of the U. S. with its glorious history, but now is a time when we need to see that we measure up to the stature of real Americans. And we can not do that if we sit back and do nothing. Our glorious flag has been made what it is by men and women who have been willing to sacrifice their all for the privilege of being Americans and for keeping liberty alive in America.

THE PIVOTAL QUESTION

Said Joe to Sam in fierce debate,
Upon the woman question,
"You've answered well all other points
Now here's my last suggestion:
When woman goes to cast her vote—
Some miles away, it may be—
Who, then, I ask, will stay at home
To rock and tend the baby?"

Said Sam, "I own you've made my case
Appear a little breezy.
Suppose you put this question by,
And ask me something easy!
Yet, since the matter seems to turn
On this, as on its axis,
Just get the one who rocked it when
She went to pay her taxes!"

Is there a creamery, a livestock or a cow testing association in your community? Be one of a "bunch" of boosters. Get together and stay together.

AUGUST FASHIONS REFLECT THE APPROACH OF FALL

A Peep Into the Future Discloses Long Tunics and Smart Satin Dresses in the New Shades

In August, in spite of the fact that this is the month when the midsummer heat is at its height, women who are interested in fashions generally begin to turn their thoughts to the new season that is approaching.



© McCall

One of the New Versions of the Tunic Dress

The Long Tunic Prominent

There is no doubt that the long tunic will be popular for the coming season—everything goes to show this. In the very newest models the tunic is employed and in ever so many charming ways. In the smart dress illustrated above, the long tunic, pressed into straight pleats and parted at the side, shows one of the favored designs. Buttons placed close together on the one side and bound buttonholes—just as many of them as there are buttons—on the other side, make the opening of the tunic much more interesting, for this is certainly a novel treatment and one which will attract lovers of the unusual.

Other styles in tunics are gathered at the top, with a deep contrasting band across the bottom which falls in points at the sides. The upper part

is usually of sheer material such as Georgette crepe or chiffon, and the band of silk or satin. In very elaborate dresses the band is embroidered in several colors or braided in a contrasting or self-color.

Brown and the Wine Shades

Altho there is a predominance of navy blue at present, brown and the wine shades will be very smart for fall, according to the best authorities. Smart dresses of brown satin with white satin collar and cuffs are already seen, and this color is also noticed in the new Georgette dresses which are worn over silk slips of a contrasting color. All-black satin frocks or black with white trimmings are very fashionable, too.

Stripes and plaids are to be very strong in silks as well as wool fabrics, and very interesting are the new combinations. On a very dark blue background there is a stripe, not very wide, formed from three narrow stripes with green in the center and orange on either side. Another effective striped material has a navy background with fairly wide green stripes and a hairline blue stripe in the center and on the sides of the green. Bolder stripes in



The Tie-On Dress is a Familiar Sight These Days

various bright colors also widen the variety of the striped fabrics. For separate skirts these new stripes and plaids are particularly smart and may be worn effectively with coats of a plain color.

The Tie-On Dress

The tie-on dress in wool jersey, satin, shantung or taffeta is a very familiar sight these days, for everyone seems to possess a dress cut on these lines. The model illustrated above is one of those very wearable frocks which fit in on many occasions. It has not only its tie-on style to recommend it, but the straight effect of the pleated skirt and the side pockets with the contrasting laps which are still counted among the fashion features of the hour.

Tie-on styles have been so much of a success that not only have we dresses with sash-ends that tie at the back, but separate waists also, and the very latest is a coat suit made on these lines. A very modish suit it makes, too. The one I saw was of mustard-colored shantung with a large white collar. The coat was about finger-tip length and the front was cleverly cut to cross in front and tie behind, while the coat proper extended below the hips.

THE NEW SCHOOL FROCKS ARE READY

Cotton Frocks Trimmed with Wool Embroidery, and Wool Dresses in Military Styles, Are Novelties of the Season.

The styles are simple and therefore very easily made. Plenty of cotton frocks and some woolen ones for cool days should form the main part of the school outfit. The familiar chambray and gingham, and also cotton poplin and rep which have served for children's school frocks generations upon generations have not been supplanted by any other material for the cotton tub frock this year. These little dresses may be made very smart by the use of simple embroideries in heavy cotton or in wool.

The Military Dress for Girls

This fall there is something new in styles for both girls and boys, and this is the military element which is frequently noticed. The sketch above shows a military dress for girls, buttoned down the front and provided with an ample supply of pockets. The dress is developed in blue serge with flannel collar and cuffs, and a red silk tie makes a kind of patriotic costume which is sure to appeal to the patriotic instinct of the school-girl. There are some of these dresses made with detachable capes reaching about to the waistline. Some of the capes have turned-back revers in front, faced with pretty colored silk which is also used for the lining of the cape. One of these dresses in serge or gabardine is just the thing for autumn wear, as the cape makes a separate coat unneces-

sary at the beginning of the cold weather.

Some of the suits for little boys are



A Patriotic Dress in Military Style



The Gingham School Frock Is Ever Serviceable

also equipped with these military capes. Boys have, this year, trench

suits and trench coats—just the very name alone will excite their interest, but the styles, too, will please them. The coats are cut like those of the soldiers and belted at the waist with leather belts. Little suits for small boys are made with straight knee trousers and long blouses. Double-breasted effects, straight closings and vests are featured in the blouses which are sometimes finished with small round collars and again with sailor collars.

The fall coats for children are made of soft woolly materials. For best wear, velvet and velveteen are used, and the collars and cuffs of fur.

TYPHOID FEVER

Typhoid fever is a germ disease that is easily transmitted by water and milk and by the housefly and wherever it has a chance to be carried. Great care should be used in guarding the water supply, so that it cannot become contaminated from outhouses. Personal cleanliness of everyone in the house is also an important safeguard. The Chinese will not eat without first washing their hands. This is a good practice for all. If one gets the hands in contact with the typhoid germs which abound in what comes from the person sick with typhoid and then handles dishes or milk utensils they can become contaminated and the disease passed on to whoever takes food or drink out of the dishes or utensils. The typhoid germs may live for some time outside the body. In these days of extensive travel the typhoid germs may be carried for some distance within persons who have come in contact with things containing the germs. Cleanliness is a good preventive.

Remember that the sun yellows all white silk things. Dry them in the shade, or better, at night.

TWO McCALL'S CLUBS

1.

N. D. Farmer, one year.....	\$.75
McCall's, one year.....	.75
Pattern, your choice.....	.15

\$1.65

All..... \$.95

2.

Youth's Companion to 1919.....	\$2.00
McCall's, one year.....	.75
N. D. Farmer, one year.....	.75
Pattern, your choice.....	.15

\$3.65

All..... \$2.65

Address,

N. D. FARMER, Lisbon, N. D.

LAMB AND VEAL

"Those who advocate leaving veal and young lamb off of hotel and restaurant menus, as well as eliminating them from the home bill of fare are half right and half wrong," says Thomas E. Wilson, president of Wilson & Co.

Mr. Wilson asserts that allowing the largest percentage of the present volume of calves to grow up will better neither milk nor beef production. On the other hand he states that young ewe lambs should not be converted into food but should be allowed to grow, thus increasing the supply of wool as well as of good mutton. In this also there must be some discretion permitted the growers as some ewe lambs are not suitable to raise for wool or mutton.

"Unfortunately too many dairy farmers are interested only in milk production. His cows are bred to any kind of a scrub bull and their calves are taken from the cows just as quickly as possible, so that the milk may be had for the market. Now if these cows were bred to high grade beef bulls, their calves could either be raised by the dairy farmer and sold for beef, or could be sold to some other farmer who will so raise them. As it is, the ordinary calf, which is sold for veal, would not be worth as beef the cost of the corn to fatten it. Therefore, its only value is as veal. This does not apply to the up-to-date dairy farmer who breeds his cows to thoroughbred bulls of breeds known for their milk production. These calves are too valuable to be sold for veal and are raised.



Part Ownership Means Willing Service.

"People who think that every piece of veal they see served means diminishing the supply of milk or of beef in the future are mistaken. Most of the calves used for veal are fit only for veal. They would make neither good milch cows nor good beef cattle. They aren't bred of the proper stock for either.

"A good while ago I discussed with the government officials the advisability of placing good beef bulls in different sections of the country, these bulls to be bred free of charge. Something may yet come of this. It cannot be urged too strongly, for right there is where the supply of beef cattle may be increased and bettered and the serious problem of the country's meat supply solved in part.

"As to the young ewe lamb, I am heartily in agreement with the proposition that it should not be eaten. We ought to raise all the ewe lambs that are fit to raise for the sake of the wool and breeding. In the first place, the sheep raiser knows that he must have good stock to get good wool, so the majority of the ewe lambs are fit to raise. The lambs, if raised, produce regular crops of wool, and also when they grow up furnish a greater supply of mutton.

"But as to the veal idea—if the average dairy farmer were to have two bulls, one a good dairy bull and the other a beef bull, he could regulate his stock of calves so that his milk herds would be kept up and at the same time he could raise beef

cattle. This will help to relieve the steadily increasing shortage in the milk supply, as well as the meat shortage. Where this is not possible or where the dairyman cannot afford to keep two bulls, some provision should be made by the government or thru some community plan to provide the beef bull.

"Meantime, if the people will use the cheaper cuts of beef, and study how to prepare them in the appetizing ways that are possible, that will help a lot, too."

NOT A PENNY OF PROFIT

Senator Nelson in Speech

We hear much said about how the farmers are making money. There is not a farmer who within the last two years has made a profit on farming, if you figure it as the manufacturers do. When the manufacturers make their estimate, they figure what they call overhead charges, depreciation, interest on their investment, and so on. If the farmer were to apply that rule, there is not a farmer in the country who would be able to show a single cent of profit.

I will tell you how the farmer gets along. Take the average farmer with 150 to 200 acres of land in our country. How does he get along? He has a family. His daughters help to do the kitchen work. In many instances, among some of our farmers, they help to do the milking and to feed the calves. The boys work in the field. Neither the farmer's daughters nor the farmer's sons get any wages. They only get their board and clothing, and it may be a little extra change for a Fourth of July celebration or something of that kind. So, at the end of the year, because he has been relieved of the onus of paying for that labor, the labor of his daughters and the labor of his sons, and has had nothing but board and clothing to furnish them, his account shows a little on the credit side. But if you should figure it in the way the manufacturers do, overhead charges, depreciation, interest, and all that, all those extra touches that we hear of when a tariff is up, there is not a farmer in this broad land who ever makes a penny of profit.

DAISY FLY KILLER



HAROLD SOMERS, 150 DeKalb Ave., Brooklyn, N. Y.

placed anywhere, attracts and kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed effective. Sold by dealers, or 6 sent by express prepaid for \$1.

NORTH DAKOTA SCHOOL LAW

For the first time since 1911 has the State published a volume of the School Laws, and not until 1919 will another edition be printed by the State.

WOULD YOU KNOW

For what reasons a pupil may be suspended or expelled?
Whether one is allowed to read the Bible in school?
What branches must be taught every day?
For what purposes the school house may be used?
Who may vote on school matters and what are the voters' qualifications?
How schools may be consolidated?
What recourse one has if he is not satisfied with the ratings of the examining board?
Whether free text-books may be adopted without a vote?
What to do when a pupil or parent disturbs the school?
What provision is now made for transportation of pupils?
How pupils may be compelled to attend school?
Whether children may be employed in stores and factories?
How a certificate may be revoked?
What the law is regarding drinking cups, fire escapes, hitching posts, school libraries, pension fund, accredited diplomas, etc.?

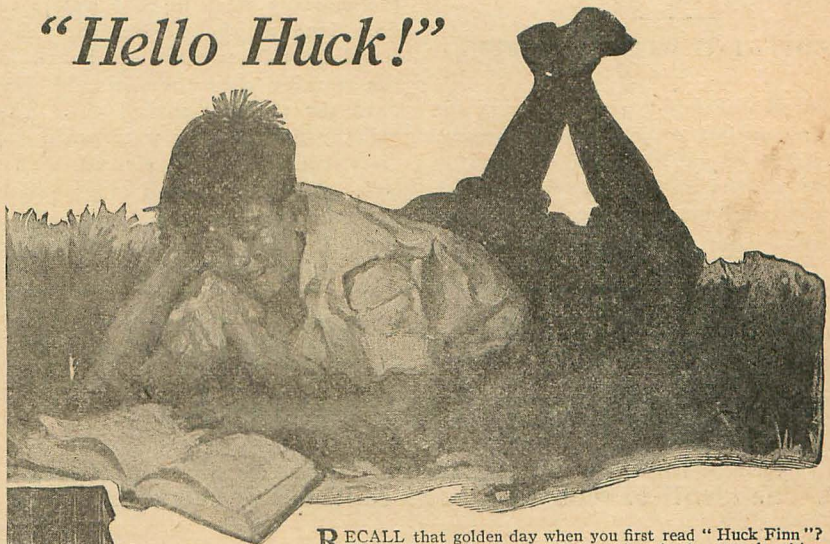
THEN ORDER A COPY OF THE LATEST SCHOOL LAWS

Price, post paid, 35 cents, including the 1917 Enactments

W. G. Crocker,

Lisbon, North Dakota

"Hello Huck!"



RECALL that golden day when you first read "Huck Finn"? How your mother said, "For goodness' sake, stop laughing aloud over that book. You sound so silly." But you couldn't stop laughing. Today when you read "Huckleberry Finn" you will not laugh so much. You will chuckle often, but you will also want to weep. The deep humanity of it—the pathos, that you never saw, as a boy, will appeal to you now. You were too busy laughing to notice the limpid purity of the master's style.

MARK TWAIN

When Mark Twain first wrote "Huckleberry Finn" this land was swept with a gale of laughter. When he wrote "The Innocents Abroad" even Europe laughed at it itself. But one day there appeared a new book from his pen, so spiritual, so true, so lofty that those who did not know him well were amazed. "Joan of Arc" was the work of a poet—a historian—a seer. Mark Twain was all of these. His was not the light laughter of a moment's fun, but the whimsical humor that made the tragedy of life more bearable.

A Real American

Mark Twain was a steamboat pilot. He was a searcher for gold in the far West. He was a printer. He worked bitterly hard. All this without a glimmer of the great destiny that lay before him. Then, with the opening of the great wide West, his genius bloomed. His fame spread through the nation. It flew to the ends of the earth, until his work was translated into strange tongues. From then on, the path of fame lay straight to the high places. At the height of his fame he lost all his money. He was heavily in debt, but though 60 years old, he started afresh and paid every cent. It was the last heroic touch that drew him close to the hearts of his countrymen.

The world has asked is there an American literature? Mark Twain is the answer. He is the heart, the spirit of America. From his poor and struggling boyhood to his glorious, splendid old age, he remained as simple, as democratic as the plainest of our forefathers. He was, of all Americans, the most American. Free in soul and dreaming of high things—brave in the face of trouble—and always ready to laugh. That was Mark Twain.

HARPER & BROTHERS, New York

The Price Goes Up

25 VOLUMES Novels—Stories—Humor Essays—Travel—History

This is Mark Twain's own set. This is the set he wanted in the home of each of those who love him. Because he asked it, Harpers have worked to make a perfect set at a reduced price.

Before the war we had a contract price for paper, so we could sell this set of Mark Twain at half price.

Send the Coupon Without Money

The last of the edition is in sight. The price of paper has gone up. There can be no more Mark Twain at the present price. There never again will be any more Mark Twain at the present price. Get the 25 volumes now, while you can. Every American has got to have a set of Mark Twain in his home. Get yours now and save money.

Your children want Mark Twain. You want him. Send this coupon today—now—while you are looking at it.

Send me, all charges prepaid, a set of Mark Twain's works in twenty-five volumes, illustrated, bound in handsome green cloth, stamped in gold, and untrimmed edges. If not satisfactory, I will return them at your expense. Otherwise I will send you \$2.00 within 5 days and \$2.00 a month for 12 months, thus getting the benefit of your half-price sale.

HARPER & BROTHERS
Franklin Sq., N. Y.

W. G. C.

Name.....
Address.....

Seasonable Receipts

Mrs. Sadie Baird, Editor

CREAMED BEETS

Boil the beets in unsalted water until they are tender, rub off the skins, slice and arrange them in a deep dish. Pour the sauce over them and serve hot. For the sauce, beat two tablespoonfuls of butter in a saucepan; stir in two tablespoonfuls of flour, one-half saltspoonful of salt, a scant teaspoonful of sugar and a dash of white pepper, then add gradually one cupful of hot cream. Heat together until smooth and entirely combined.

COVERING WITH PARAFFIN

Paraffin makes a good covering for glasses or jars or jelly and preserves. One way of putting it on is to put a piece of paraffin in each glass or jar before pouring in the hot jelly or preserves. The paraffin will melt and

come to the top. Another way is to melt the paraffin and pour it on the jelly or preserves as soon as they have been poured into the glasses or jars. The paraffin makes an air tight covering so it can be used where it is desired to keep out the air.

WATERMELON PRESERVES

Cut the rind in two-inch pieces, remove all the red flesh and cut off the hard shell. Let the rinds stand in weak alum water over night. In the morning wash in cold water, and drop into a weak brine. Let them stand in this twenty-four hours. In the morning place them in cold water until the salt has soaked out. Then boil the rind in clear water until each piece can be easily pierced with a fork. Allow one pound of granulated sugar to each pound of rind and one cup of water. Boil it to a thick

syrup. To every pound of rind allow one thinly sliced lemon, and to every two pounds add one rounded teaspoon of ground ginger tied in a piece of muslin. Drop the rinds in the syrup and cook until clear. This makes a delicious sweet. After the alum bath the rind is firm, yet soft enough to be easily cut in any preferred design; stars, hearts, rings or diamonds.

HOW TO CAN TOMATOES

Select firm, well-formed tomatoes. Scald one and one-half minutes or until skins loosen. Dip quickly into and out of cold water. Peel and remove stems and cores. Pack directly into cans or hot jars. Press down with a tablespoon (add no water.) Add a level teaspoonful of salt per quart. Put the rubber rings and caps of jars into position but do not tighten fully. Seal tin cans completely. Place the packed containers on a false bottom in a vessel of water sufficiently deep to cover them by one inch and allow to remain at a boiling temperature for 22 minutes when using hot water bath canners.

ANOTHER WAY TO USE TOMATOES

Cans are costly, time is short, and garden stuff is abundant—but perishable; then why not bottle tomato paste instead of canning all your crop of tomatoes. Tomato paste is a concentrated form, available for use in soups, sauces, and in combination with beans, macaroni and spaghetti. Every European knows tomato paste and you can buy it from the American grocer; but the housewife who has a tomato patch, can prepare paste at no expense but a little time. The advantage of this concentrated form when jars are scarce is clear—any odd bottles can be used for the paste, corked and sealed with sealing wax.

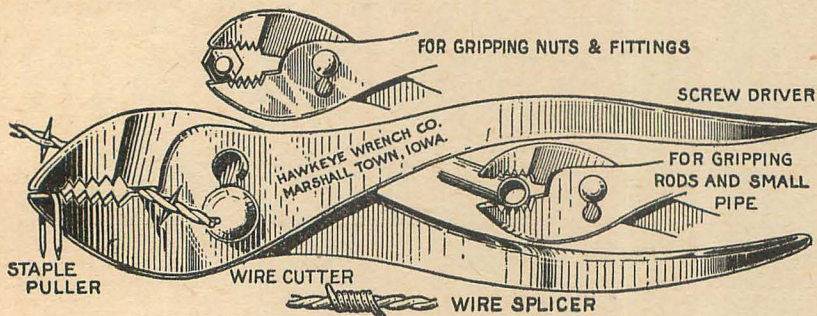
Directions for making: one quart thick strained tomato pulp; one slice onion; four tablespoonfuls of chopped sweet red pepper pulp, or one teaspoonful of paprika; one-half teaspoonful of salt; one teaspoonful of sugar; one tablespoonful of mixed spices.

Cook spices tied in bag with tomato pulp in a pan over boiling water for about three hours, or until the paste is thick enough to hold the shape of a spoon when tested by dipping out a spoonful. Bottle hot in freshly scalded bottles, cork and seal. The sealing can be easily managed if the cork is forced down below the edge of the neck and the top surface sealed over with sealing wax or paraffin.

No Handier Tool Was Ever Invented

For the home or on the farm. Note the different uses. The identical tool you pay 35 cents for at the hardware.

Do You Want It?



North Dakota Farmer, Two Years	\$1.50
Six-inch Nickel Plated Pliers35
		<hr/> \$1.85

North Dakota Farmer Two Years and Pliers, Only **\$1.10**

THE PLIERS WILL BE SENT POSTPAID.

Note: If preferred a pair of self-sharpening shears will be substituted.

North Dakota Farmer

LISBON, - - - - - NORTH DAKOTA

CAN CAREFULLY

Careful, painstaking canning is the only kind of canning that pays, declares the United States Department of Agriculture in a statement issued recently warning housewives against carelessness in putting up fruits and vegetables.

The faithful following of approved methods and directions is the only safe road to success in canning. Those carelessly practicing methods that are new to them, or attempting to 'improve' on the methods, or to make short cuts, are taking a risk of spoiling good food. Canning is essentially a scientific process, however much it may have been simplified for home use.

In the canning methods which the department advocates careful study has been made of the essentials for the preservation of food products, and all steps not absolutely necessary have been eliminated. There is good reason, therefore, for each step which is advocated. If home canners profess to follow a department method, they should follow it in detail; and if they fail so to follow it, they should frankly recognize that not the method but the application of it is at fault. Especially there should be no mixing of methods, whether those of the department or others. One method should be adopted and followed carefully in canning any given batch of products.

In the one-period cold-pack method of canning in particular, canning has been simplified greatly as compared with some other methods. For this very reason, every step called for in the directions is essential, and not one should be omitted or performed otherwise than as indicated. Specialists who have worked out and demonstrated this method of canning for the last five years, have investigated all reports of the spoilage of products, and have found in every case that the trouble was due to faulty equipment, including poor rubbers and containers, to failure to follow the directions carefully, to the use of old or spoiled vegetables or fruits, or to the local occurrence in certain vegetables of unusual spores which prove troublesome even under commercial canning practices. By following the simple directions exactly the specialists themselves have put up with homemade water-bath outfits, without loss, thousands of jars and cans of various products.

"The following points especially should be kept in mind when canning by the one-period cold-pack method:

Test jars, and use only those free from flaw.

Use only good quality live rubber rings.

Use only fresh, sound vegetables or fruits.

Wash products thoroly.

Blanch in boiling water or live steam—hot water or vapor will not do.

Dip in cold water—not tepid or warm water.

Dip quickly into and out of cold water—do not soak.

Pack into jars immediately—do not let the dipped products stand uncovered while you attend to something else.

Be sure the jars are hot when the product is put into them. They can be kept hot in vessels of boiling water.

Place the top and rubber on each jar as it is filled—do not wait until all the jars are filled.

Place the jars in boiling (not merely hot) water deep enough to cover them entirely (not merely part way up the side of the jars.)

Sterilize for the full time indicated in the directions. Count time after boiling point has been reached.

After sealing, turn jars upside down to cool, so that those with leaky seals may be found easily, and so that their contents may be resterilized in tight-sealing containers.

Store in a cool place—not in a hot kitchen or attic.

Above all, plan so that you will not be interrupted. Then work quickly, and devote your whole attention to the work in hand. Let all other housework go, if possible, until all the jars are in the sterilizer. Any delay in performing the steps between blanching and sterilizing means risk of loss.

BOTTLE FRUIT JUICES NOW

Women in town and country who doubled their garden plots last spring are now busily saving the surplus for winter use. It is a time when everything piles up at once, and any suggestion that lightens the job ought to be welcomed by overworked "conservationists".

Nothing seems quite so hot as jelly making, and it will be found a relief to bottle fruit juices in summer to be made up into jellies in winter as needed, and when there is cash to spare for sugar. If you find yourself overstocked with fruit juice when fruit time rolls around again, you have lost nothing but a little labor.

There are several uses to which this fruit juice may be put. It makes delightful drinks or fruit punches, which when served with plain sponge cake makes a delicate desert or refreshment for small gatherings.

Children will appreciate fruit syrups or "honeys." They are delicate in flavor. These syrups are made by

cooking the juice with sugar until it is as thick as maple syrup. Then too the fruit juice may be used in winter sauces or added to dried fruits in making preserves.

If fruit is scarce, apples and pears too defective for preserving, or cores and peelings left over from preserving may be used for making fruit juice. Or the juice may be evaporated to a syrup without sugar, and used as sauce for breakfast cakes.

In preparing the juice for bottling, proceed as for jelly. When juice is extracted heat it almost to boiling and pour into a small-necked bottle. The bottle and cork should be taken from boiling water in which it has been for half an hour. Drain, pour in the hot juice, cork with sterile cork and coat with sealing wax or hot paraffin.

Juices extracted from berries or grapes will be found particularly good for drinks and sauces, while apples, pears and peaches make agreeably flavored syrups.

For the invalid

as well as
those in
perfect
health



Baker's

Cocoa

is an ideal
food
beverage,



pure,
delicious
and
wholesome.



Walter Baker & Co. Ltd.
ESTABLISHED 1780 DORCHESTER, MASS.



Which Will You Have

Here are two cans of Paint.

Both are exactly the same size.

One will cost you \$2.75 per gallon. The other will cost perhaps as little as \$1.75 per gallon, but the Mound City Horse Shoe Brand at \$2.75 per gallon will cost you less in the end.

Reason? Simple enough.

Because a gallon of "Horse Shoe Paint" will cover a larger surface than the cheaper grade, and fewer gallons are required for the job. By actual test you will find that six gallons of "Horse Shoe Paint" (enough for two coats on a house measuring 2100 square feet) will go as far as ten gallons of the \$1.75 kind.

In other words, you invest \$16.50 in "Horse Shoe Paint," against \$17.50 in the cheaper grade.

Not only this, but the Horse Shoe Brand is bound to outwear the other two to one, making the Horse Shoe Brand far more economical in the end.

You save on the total cost of material.

You save in labor, because of the long life of the Horse Shoe Brand.

You save once more in the satisfaction of knowing that your property is beautified and protected with the highest quality of painting material that modern skill and science has yet developed.

AGAIN!! Mr. Property Owner—

Which will you have?

Mound City "Horse Shoe Brand" Paint

Sold only by

Paint, Hardware, Lumber and Drug Stores

Write for name of your nearest dealer

Mound City Paint & Color Co.

MANUFACTURERS - ST. LOUIS, U. S. A.

NORRIS B. GREGG, Pres.

WM. H. GREGG, Jr., Vice-Pres.

E. H. DYER, Sec.